IN TWO PARTS—PART ONE

AIR CONDITIONING HEATING & REFRIGERATION NEWS

The Newspaper of the Industry

RESIDENTIAL — COMMERCIAL — INDUSTRIAL

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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Stories of the Week
Any Comment?
An Open Letter To Farmer Yankus
Out of Our Mailbag
Typical Speaker?

Stories of the Week

Little green men emerged from a flying saucer. Immediately they began looking all around for . . . something.

"May I help you?" welcomed an Earthian. "What are you seeking?"

"Little green women," panted their leader.

Person was advised to put himself under the care of a psychiatrist.

"Why should I spend 50 dollars an hour," he protested, "to squeal on my mother?"

Any Comment?

In a recent issue of the *Antiquarian Bookman,* a Montreal bookseller offered the following item:

"Johansen, *Humiliating Experiences of One-Legged-Girls,* N. Y. 64 pp. 3.00."

"Liberal" spenders frequently trumpet that the bloated growth of Government appropriations is required to support our so-called "exploding" population.

A recent study by the Tax Foundation, Inc. reveals that while the population of the U. S. has increased by about 33% in the past 20 years, the cost of Government—Federal, state, and local — has increased almost 600%.

At the recent Washington Conference on Air Pollution several speakers linked air pollution and cancer in urging that action be taken before irreparable damage is done.

Out of the conference also came a new word, "smout." This term denotes smog plus radioactive fallout.

Atmospheric hazards, in addition to such man-made complications as industrial smoke and auto exhausts, are perilous enough. When we add the noxious spore of nuclear tests we are, in the words of one speaker, "paying . . . a burnt offering to the gods of progress."

An Open Letter To Farmer Yankus

When historians assay (in perspective 50 years from now)

(Concluded on Page 31, Col. 1)

Room Unit Tax Rule May Not Hit 'Til July

DETROIT—It is now the belief of those who have followed the situation closely that the revision of the U.S. Internal Revenue Ruling 54-462, which will impose the 10% excise tax on all room air conditioners instead of just on those units under 1 hp. in size, will not go into effect until after July 1, 1959.

That date marks the beginning of a new U.S. government fiscal year, and the feeling is that those in the Internal Revenue Service directly concerned with the air conditioner excise tax will not be likely to put it into effect before that date—unless there is pressure from some higher authorities. If an earlier date is ordered it might be April 1, which is the start

(Concluded on Page 4, Col. 5)

WASHINGTON, D. C.—The manufacturers' excise tax on self-contained air conditioning units would be reduced to 5% under a bill introduced by Rep. A. S. Herlong, Jr. (D., Fla.) and referred to the House Ways and Means Committee.

The measure (H.R. 5206) would apply only to units sold after the first day of the first month that begins more than 10 days after enactment of the bill.

Westinghouse Moving Lines To Columbus

COLUMBUS, Ohio—Plans to manufacture four additional products at its Columbus plant within the next few months were announced by Westinghouse Electric Corp.

John W. Craig, Westinghouse vice president and general manager of the Electric Appliance Divs., announced that the company this summer will begin to transfer to Columbus the production of room air conditioners, dehumidifiers, food-waste disposers, and water coolers from the firm's plant at Springfield, Mass.

The sales operations for these

(Concluded on Page 4, Col. 1)

February Building Holds to High Level

WASHINGTON, D. C.—A Government report indicates that construction continued at record levels in February despite an expected seasonal decline from January.

February value of new construction was put at $3.5 billion by the Commerce and Labor Depts. This was 12% higher than the previous February high of $3.1 billion set last year, although off about 5% from the January total of $3.7 billion.

For the first two months of 1959, it was estimated, the figure for private and public spending

(Concluded on Back Page, Col. 1)

1959 Air Conditioning 'Show Case' – With Specifications

This, the "Air Conditioning 'Show Case' Issue—With Specifications" can possibly best be read with the idea that it contains four principal kinds of information—all of which can be of vast assistance to anyone who has any kind of interest in the air conditioning industry.

1—SPECIFICATIONS on 1959 lines of air conditioning equipment marketed by 115 firms. This year, a new category—Split Systems—has been added to the regular Room Air Conditioner, Commercial Package, Residential Package, and Heat Pump classifications. This specifications service is designed to tell you "who makes what" in the air conditioning industry.

2—THE VARIOUS ADVERTISEMENTS, designed to demonstrate what manufacturers of air conditioning equipment and accessories are offering for the 1959 market.

3—MERCHANDISING IDEAS to give you an edge on the market in your area: **The Public Likes and Wants Air Conditioning** is a study of why people have bought it and why those who haven't would like to get on the bandwagon (6). **Health Factor, Pride of Ownership Seen as Neglected Areas In Selling Residential Market (17). Cost of Good Year-Round Residential System Can Be Kept Low** in which Dallas builder explains how he cools homes in the $13,000 class (18). **Chain Stores—$100 Million Market** explains how contractor can boost his net profit with national account sales (28). **A Look at the New Orleans Market** shows how Residential, Commercial, and Industrial Markets are developing in this area (36). **What Are the 'Special' Methods of a Successful Dealer?** This one who does 75% of his work in residential field, says its getting easier to sell in home market (44). **Orderly Approach to Selling Air Conditioning** is a step-by-step description of the selling process (48).

4—TECHNICAL INFORMATION on installations and service problems: **Packaged Unit with Suitable Accessories, Controls Meets Testing Lab Needs (14). Controlling Noise In Ductwork** in which consulting engineer offers ideas on duct liners and sound traps (52). **Five Heat Pumps Provide Zoned Year-Round Air Conditioning for Church Addition (30). Subjective Feelings and Air Conditioning**—how individual's reaction to his environment is giving impetus to re-evaluation of ASHAE Comfort Chart (34). **"Can I Charge Liquid Into Low Side?"**—Technical Center begins discussion of refrigerant charging procedures (54) and **Thermometer In Service Work** (56).

Opinions Differ

Heat Pump In the North?

DETROIT — The heat pump has proved itself in the South where climate, power rates, and performance have combined to make it successful.

In the North, however, there are those who vigorously question that the heat pump is economically or physically ready to take on year-round comfort conditioning, while others report successful operation under the severest type of weather conditions.

Drawing upon information gathered throughout the country, the NEWS reports this mixed reaction to the heat pump north of its traditional territory.

Once the battle line in Korea, the 38th parallel is shaping up as the dividing line in this country between partisans on each side of the increasingly vehement heat pump fight—a fight which threatens to erupt publicly.

On one side are those manufacturers and power companies actively pushing residential heat pumps far above the 38th parallel, which runs roughly along the northern borders of North Carolina, Tennessee, Arkansas, Oklahoma, New Mexico, and Arizona. (East of the Ohio river, the Mason and Dixon Line, 39°-43′, marks the traditional northern boundary of "heat pump country.")

"We have successful air-to-air jobs operating in Kansas and Missouri at 0° design temperatures," emphasizes one manufacturer. Another shows that he has over 100 units going into a housing development in Chicago.

"Heat pumps have operated successfully through one of the coldest winters in memory," insists a Midwest power company executive.

Opposing this position are those power companies and engineers who insist that heat pumps are being oversold and overpromoted. These people warn that such tactics may backfire on the industry. "There are just too many companies making these things and far too many electric utilities going off half-cocked without looking at

(Continued on Page 63, Col. 1)

Houston Reports Record Sales

HOUSTON, Texas — Record high sales of room air conditioners and "impressive gains" by the heat pump were among highlights of the 1958 sales year in this area, the Houston Lighting & Power Co. reported.

Sales last year of conventional room units (cooling only) — window and console type through 2 tons—were nearly 4% greater than the volume set in 1957, totaling 81,681 against 78,705.

In the central electric cooling unit category (2 to 15-ton sizes), sales in 1958 were almost equal to the 1957 level, amounting to 7,777 compared with 7,881.

(Concluded on Back Page, Col. 3)

A round-up of 1958 room air conditioner sales for a number of other areas appears on page 25.

Jamos Acquires Sutton Auto Cooling Div.

FLUSHING, N. Y.—The Jamos Corp. here announced its acquisition of the automotive division of O. A. Sutton Corp., manufacturer of Vornado automobile air conditioners.

It is understood the purchase price was in excess of $1,000,000 and included patents, the trade name Vornado, inventories, tools, dies, and machinery.

Jamos, formerly sales representative for Sutton's Automobile Air Conditioning Div., said it has formulated a comprehensive program to continue the manufacturing and distribution of the Vornado automobile unit, "with special emphasis on its competitive price structure."

Key personnel of Sutton's engineering staff have joined the Jamos organization, and are perfecting the design of the 1960 Vornado unit, it was stated.

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For 1958

Shipment of Galvanized Steel Sheets for Heating, Cooling, Ventilating Up 18%

NEW YORK CITY — Shipments of galvanized steel sheets for use in air conditioning, heating, and ventilating equipment during 1958 increased by 18.3% over 1957, according to American Iron & Steel Institute figures reported by the Committee on Galvanized Steel Sheet Research.

Actual tonnage figures show that the air conditioning, heating, and ventilating industry received shipments of 135,751 tons of galvanized steel sheets in 1958, as compared with 114,769 for 1957.

These figures represent shipments directly to the industry and do not include the large amount of galvanized sheets normally bought by the industry through warehouse and dealer outlets, it was further pointed out.

The committee noted that the increase in shipments for air conditioning, heating, and ventilating was almost identical with the 1957-58 increase in total shipments shown by the galvanized steel sheet industry as a whole.

The committee predicted a sharp increase for both industries during 1959, noting the "strong trend towards increased use of galvanized steel ductwork in residential building, and important technical developments in commercial air conditioning and heating such as the high velocity air system."

Contra Costa County APC Gets Bid Depository Procedures Underway and Signs Contract with UA

BERKELEY, Calif.—The Associated Plumbing Contractors of Contra Costa County has a new one-year contract with United Association Local 159 of Martinez and Richmond, according to Don L. Geisert, executive manager.

In previous contracts local union rules had been injected. The new contract has no working rules.

There is a provision for termination of stewards in the event their work is not satisfactory. Contractors are specifically given the right to select foremen.

Business agent for Local 159 is Elwin S. "Bill" Johnson.

Geisert also announced that APC of Contra Costa has moved its offices from San Francisco to Suite 20-2521 Regent St., Berkeley.

Address for the bid depository operated by the association remains the same: Crocker-Anglo National Bank, Broadway & South Main Sts., Walnut Creek, Calif.

Commenting on the depository, Geisert said numerous general contractors are becoming aware of depository advantages.

He described the changed reaction of a general contractor, owner of an established construction company, who when first approached said he was not interested in getting his sub-bids from the bid depository.

Later at a luncheon with Geisert, the contractor said: "I have changed my mind about bid depositories. I lost $40,000 because of oversights, caused by a frantic last-minute rush, because I was getting my sub-bids without advantage of bid depository procedure and time rules."

Rules of APC of Contra Costa's bid depository now provide all bids must be in an hour before closing time.

Setting up operations began in May, 1958 and was helped by the favorable judgment of Judge Jertberg, then of the Fresno Federal District court, in the Bakersfield Construction Industry Bid Depository case.

All areas of suspicion were eliminated in drawing up rules and amendments, Geisert said, by making procedure fair and complete, conforming to points set forth in the Bakersfield case.

The depository fee schedule is based on realistic cost of operation, it was stated.

State APC President Dudley Haverty discussed the establishment of Contra Costa's bid depository and commented favorably, in a speech to the members at their January meeting.

big b.t.u. bonus

New! Coleman 4 and 5-ton

Air Conditioning . . . with full capacity

You asked for it. Now it's here—giant-sized Coleman residential cooling.

Famed Coleman Polar Prince remote air conditioning is now available in 4-ton and 5-ton systems.

And they deliver *full* capacity!—actually more cooling than required by ASRE standards for 4-ton and 5-ton unit ratings.

Look at the figures: Under ASRE conditions* the 4-ton Polar Prince delivers *49,000 btu's.* The new 5-ton Polar Prince delivers *61,100 btu's.*

Sell new Coleman Polar Prince Air Conditioning. Make sure your customers keep cool and stay happy. Coleman's big btu bonus pays you a big bonus—more sales, more customer satisfaction, fewer service calls . . . Ask a Coleman dealer who has installed one!

Write, wire or call for prices and specifications. Immediate delivery.

*ASRE conditions—Ambient °F—95/75 saturated suction °F—45

Coleman

Now America's only bonded line of home heating and air conditioning is bigger and better than ever.

The Coleman Company, Inc.

Wichita 1, Kansas

Carrier First Quarter Earnings Equal Year Ago

SYRACUSE, N. Y. — First quarter earnings of Carrier Corp. were approximately the same as in that period a year ago, the company reported.

For the three months ended Jan. 31, 1959 the figures were: Orders booked, $50,048,000; net sales, $49,480,000; net profit, $396,000 or nine cents per common share. And the backlog of unfilled orders at the end of the quarter amounted to $97,825,000.

The comparable figures for the first quarter of 1958 were: Orders booked $62,272,000; net sales, $50,811,000; net profit, $412,000 or ten cents per share of common stock. As of Jan. 31, 1958, the backlog stood at $117,456,000.

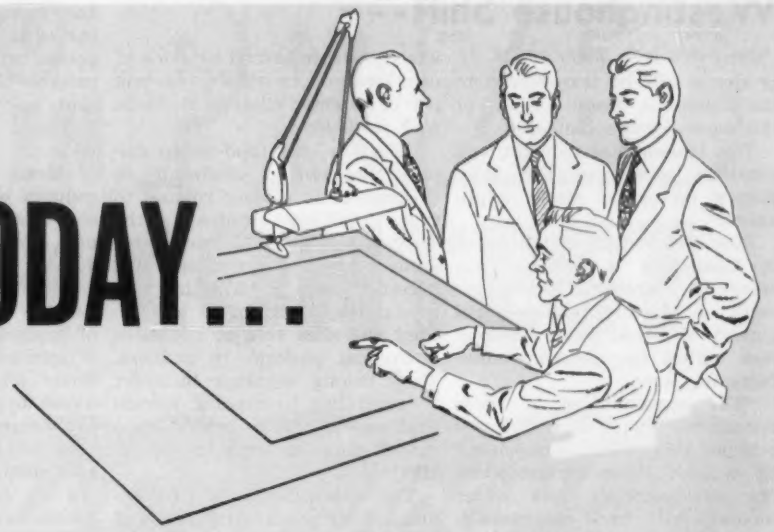
Commenting on first quarter results, Cloud Wampler, chairman of the board, said: "Net sales of most divisions were higher than in the same period last year. However, the over-all total was down somewhat chiefly because of lower shipments by Elliott Co. due to the decline in orders booked during 1958.

"Orders for Carrier products in the consumers' durables category were up over 1958. But there was a substantial drop in heavy equipment bookings, especially from government sources."

As of Jan. 31, 1959, Carrier's current assets were 4.75 times current liabilities with no bank loans outstanding.

Regarding the outlook for the remainder of the year, Wampler stated: "Our budget for fiscal 1959 calls for a larger net profit than last year on approximately the same volume of sales. Whether this objective can be attained depends in high degree upon an improvement in demand for Carrier products in the capital goods field.

"Also it should be noted there is no letup in the profit squeeze or competitive pressures."



GOING STRONG TODAY... GEARED FOR BIGGER THINGS TOMORROW

COPELAND SHIPMENTS ARE UP 30% over a year ago! This is added proof of our continuous progress in serving the air-conditioning and refrigeration fields.

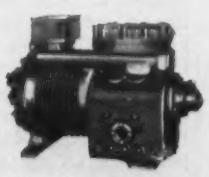
Quality-conscious customers are responsible for our growth, and we have carefully guarded Copeland quality by innovations and advances which keep our production facilities at peak efficiency day after day.

Our plans for the future are even broader. Never-ending research and product development enable us to quicken the pace of our ability to serve, as we increase capacity and efficiency of our quality line.

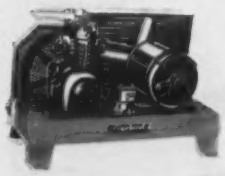
AVAILABLE SOON will be our 15-ton and 20-ton Copelametic compressors for air-conditioning and high-temperature applications (7½-H.P. and 10-H.P. for low-temperature). These compact, accessible hermetics will give all the long-time, carefree service traditionally engineered into every Copeland product. They are part of a field-proven line . . . quiet and, of course, competitively priced. In your own big plans for the future, get the added protection of counting on Copeland.

High-production facilities, such as the unique carousel conveyor shown here, are a further guarantee of the time-tested quality you can be sure of with Copeland.

SINCE 1918 **Copeland** REFRIGERATION CORPORATION, Sidney, Ohio

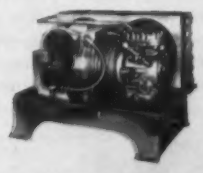


COPELAMETIC MOTOR-COMPRESSORS

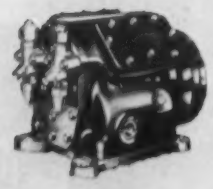


BELT-DRIVEN CONDENSING UNITS

COPELAWELD MOTOR-COMPRESSORS



COPELAMETIC CONDENSING UNITS



HIGH-SPEED AUTOMOTIVE COMPRESSORS

Westinghouse Shift--

(Concluded from Page 1, Col. 3)

products will be transferred to the Columbus Works as part of the move, it was indicated.

The Massachusetts plant will continue producing the company's motorized small appliances.

First production of the items in Columbus is scheduled to start in October. Rearrangement of existing facilities will permit the additional production within the present manufacturing area.

"The consolidation of these operations in Columbus will achieve large-scale economies," Craig said. "Room air conditioners, dehumidifiers, and water coolers all are compressor-driven refrigeration products, similar to refrigerators and freezers, the biggest volume items in Columbus.

"Economies dictate that all such products should be made at one location, to obtain the best use of common equipment, tools, and facilities.

"Further, the food-waste disposer currently produced in Springfield is closely related to two Columbus products — the dishwasher and electric water heater. All three are closely tied together from a marketing and production standpoint, because they are often sold as a kitchen equipment package to builders. They belong together in order to capitalize to greater advantage on the growth in new home construction anticipated for the 1960's."

The consolidation was recommended by results of surveys of the firm's appliance operations conducted over the past 18 months, he said.

Emphasizing the highly competitive nature of the appliance business—which in recent years has forced a number of companies to close their doors altogether or merge with other companies—Craig said it is clear that only the most effectively managed operations will survive.

"Every practical measure that reduces our costs will increase our chances of staying in business and providing jobs," he added. "If we should fail to adopt such measures, we would run the risk of being forced out of business in a good many lines of appliances. This would mean fewer jobs at all the Westinghouse appliance plants, including Columbus."

In recognition of the "special and unique circumstances existing at Springfield," Westinghouse has prepared a program to assist any Springfield employes who may become unemployed as a result of this transfer of operations, according to the announcement.

Superior Appoints William C. Yocum

PITTSBURGH — William C. Yocum has been appointed vice president in charge of engineering, it was announced by the board of directors of Superior Valve & Fittings Co.

W. C. Yocum

Yocum, who was elevated from chief engineer, will be responsible for all phases of the company's engineering developments in the refrigeration, air conditioning, compressed gas, and missile industries.

He joined Superior as a sales engineer in 1947, served as assistant plant superintendent and design engineer, and was named chief engineer in 1953.

Excise Tax--

(Concluded from Page 1, Col. 2)

of a new fiscal quarter.

When the revised tax ruling goes into effect, it is assumed that it will be applied to manufacturers' inventories. However, there would seem to be no legal basis for applying it to distributor and dealer inventories, where it can be proved that title to the merchandise has passed from the manufacturer.

Partial Text of Proposed Revision

The proposed revision of Revenue Ruling 54-462 reads, in part:

"Is is held that a self-contained air conditioning unit subject to tax under section 4111 of the Code includes a compressor type or an absorption type unit, whether a factory-made encased assembly or one sold for assembly on installation, which is designed for the free delivery of ducts of conditioned air and for use as a portable or console unit or for installation in or in front of a window or other opening. It incorporates means for cooling, dehumidifying, and circulating the air of a room or other enclosure and may also include means for ventilating, heating, or for performing other functions.

"The above definition makes provisions for units which may include means for heating the air. . . ."

Industry Opposition Delays Action

The IRS further stated, in announcing its intention of modifying Ruling 54-462, that "under the aforementioned rule motor horsepower or B.t.u. per hour cooling capacity will not be considered in determining the taxability of self-contained air conditioning units."

The IRS originally announced its intention of revising the existing revenue ruling late last summer. However, industry opposition, particularly in the form of protests by the Air-Conditioning & Refrigeration Institute and National Electrical Manufacturers Association, helped to defer imposition of the tax.

Industry representatives contended that with fairly substantial inventories on hand, and an industry production year just having been concluded, immediate imposition of the tax would result in a chaotic market condition.

It was also felt that the text of the proposed revision needed further work, to cover a number of points which seemed to be open to interpretation.

For example, a literal interpretation of the revised ruling might make the tax applicable to any self-contained air conditioner, regardless of size or application, which did not have ductwork. And the question of taxing units which provide a heating function, particularly the popular "heat pump" type units, also needs to be resolved.

The ARI has proposed a size limitation—the tax to be imposed on all units with a heat removal capacity of 17,000 B.t.u./hr. or less. NEMA has asked for the exemption of all heat pump type units.

PEERLESS PERFECTEMP

brings profit back into the home heating and cooling field!

Free yourself from the profitless struggle of trying to out-price the "price-cutters" in your area. Peerless offers you the kind of profits you want and deserve with its complete lines of heating and air-conditioning equipment . . . finest quality units preferred by home-owners for PerfecTemp performance, a feature "price-cut" equipment can never provide. It will pay you to consider a change for the profits to Peerless PerfecTemp.

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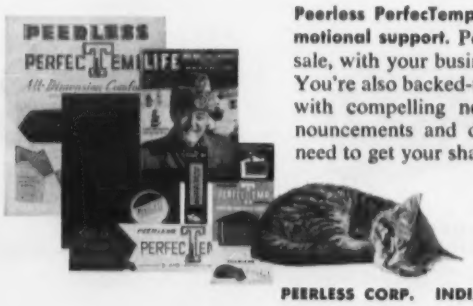
and Lifetime Guarantee give you the performance advantage. Exclusive *PerfecTemp* feature forcefully shows the big advantage of Peerless *all-dimension comfort* over the "lazy air" performance of inefficient and price-built equipment. Exclusive *Lifetime Guarantee* stands behind the quality of Peerless equipment with positive assurance of the long-lasting performance, and clinches the sales.



Peerless PerfecTemp helps you sell with all-phase promotional support. Powerful LIFE advertising starts the sale, with your business name listed as "where to buy." You're also backed-up with an advertising guide packed with compelling newspaper ads, displays, radio announcements and demonstrators . . . everything you need to get your share of sales, at the most profit.

Get all the facts first hand about a profitable Peerless dealership — write today, without obligation, to Mr. O. U. Mutz, Natl. Sales Mgr.

PEERLESS CORP. INDIANAPOLIS 7, INDIANA *Quality famous for more than half a century*

$20,000.00 IN PRIZES

FREON® "PARTNERS IN PROFIT" CONTEST

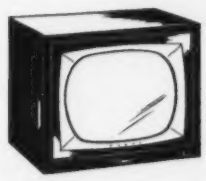
1ST PRIZE CHEVROLET STATION WAGON!

1959 Kingswood with air conditioning, air suspension, power steering, radio, heater, automatic transmission . . . fully equipped . . . $4,000

3-2ND PRIZES

$1,000 UNITED STATES SAVINGS BONDS

5-3RD PRIZES



RCA VICTOR "MARK 21" COLOR TV worth $495 each

25-4TH PRIZES

POLAROID "HIGHLANDER" CAMERAS worth $72.75 each

250-5TH PRIZES

WESTINGHOUSE TRANSISTOR PORTABLE RADIOS worth $39.95 each

-284 CHANCES TO WIN!

Hints to help you win

Your complete air conditioning and refrigeration wholesaler is *your* partner in profit. It will pay you to know and use his services, cultivate his friendship. Here are some of the benefits you get by dealing through your wholesaler.

- **Convenience** of buying at a one-stop supply source. Your wholesaler keeps ample, diversified stocks of high-quality air conditioning and refrigeration parts, equipment and supplies.
- **Immediate delivery** by your wholesaler permits you to give prompt, dependable service—imperative in emergencies.
- **Cost savings** because your wholesaler assumes expenses of inventory, warehousing, shipping, accounting and insurance.
- **Expert technical and engineering help** when you want it. Your wholesaler assists with design problems, figuring material costs; gives catalog service, prices and up-to-date information on new products.

"Freon" Check List

Look for this list of premium qualities of "Freon" refrigerants on your official entry blank. Check the one you consider most important.

- ☐ Time-tested—over 27 years in use—you can't go wrong with "Freon."
- ☐ Stable, pure and dry.
- ☐ Factory-sealed for purity.
- ☐ Nontoxic, nonflammable.
- ☐ Always available—anywhere in the world.
- ☐ Made by Du Pont—backed by years of technical and manufacturing leadership.

Insist on genuine "FREON"—Premium Quality Refrigerants . . . in the cylinders with the gold-hood caps.

DU PONT
Better Things for Better Living . . . through Chemistry

"FREON" PRODUCTS DIVISION
E. I. DU PONT DE NEMOURS & CO. (INC.)
WILMINGTON 98, DELAWARE

*Freon and combinations of Freon- and F- followed by numerals are Du Pont's registered trademarks for its fluorinated hydrocarbon refrigerants.

CONTRACTORS, SERVICE MEN . . . You are eligible to win an air-conditioned 1959 Chevrolet station wagon if your company has bought Freon* refrigerants from a complete air conditioning and refrigeration wholesaler within the contest period (January 26, 1959—May 15, 1959). Read over the simple rules and hints to help you win. Then just tell us why *you* think it's good business to deal with a *complete air conditioning and refrigeration wholesaler*. It's easy! Enter often! You can get official entry blanks through your wholesaler. Ask him about the Freon® "Partners in Profit" Contest *today*.

SIMPLE CONTEST RULES:

1. Contest is open to all firms and their employees who are customers of complete air conditioning and refrigeration wholesalers providing that the customer firm purchases "Freon" refrigerants from a complete air conditioning and refrigeration wholesaler during the contest period (January 26, 1959 to May 15, 1959). Employees of E. I. du Pont de Nemours & Co., its subsidiaries, its agencies or its wholesale distributors of "Freon" refrigerants are not eligible to enter the contest.

2. Check the quality of "Freon" most important to you.

3. Complete this statement in 35 *additional* words or less: "I believe it is good business to deal through a complete air conditioning and refrigeration wholesaler because . . .

Mail your entry to: **FREON® CONTEST, Box 22F Mount Vernon 10, New York**

Entries must be postmarked by May 15, 1959, and received by us at least within eight days of this date.

4. You may enter as often as you like. Your entry must be your own original work and must be submitted in your own name, on an official entry blank, obtainable through your complete air conditioning and refrigeration wholesaler.

5. Prizes awarded by Reuben H. Donnelley Corp., on the basis of their judgment regarding originality, sincerity and aptness of thought. Duplicate prizes awarded in case of tie.

6. Judges' decisions are final. All entries and ideas become the property of E. I. du Pont de Nemours & Co. (Inc.). None will be returned. Contest is subject to federal, state, and local regulations.

7. Winners will be notified about six weeks after close of contest.

The Public Likes and Wants Air Conditioning

Survey Indicates (1) Belief in Health & Sleeping Benefits (2) High Rank Among Planned Purchases (3) Exposure To It Ups Tendency To Buy It

NEW YORK CITY—Air conditioned homes represent "a new way of life" is the opinion of Dr. Donald F. Blankertz, following a study made for Carrier Corp. last July in Levittown, Pa. where researchers under his direction interviewed 143 families living in homes with central air conditioning and 141 families in identical homes without air conditioning.

Dr. Blankertz is director of the Graduate Division of Business and Governmental Administration, Wharton School of Finance and Commerce, University of Pennsylvania.

Results of this Levittown study were revealed by Dr. Blankertz at a recent "seminar on air conditioned living" here sponsored by Carrier for representatives of the trade and consumer press.

"It takes no Henry Adams to predict that in our technological age an almost universal use of air conditioning by American families is sure to come," he told the seminar. "The only real questions are: how quickly? and by what means?"

Some evidence on these questions, he said, was gathered in the Levittown study, but the results should be qualified by remembering that these people are suburbanites and not necessarily representative of all American families, Dr. Blankertz indicated.

"Much merchandising of air conditioners has stressed special appeals. One of these is health. Air conditioners not only cool air, they control humidity, and remove pollen and dust from air, so that health is affected," he said.

"As indicated in Table 1, a large majority of Levittowners believe that air conditioning helps persons suffering from heat rash, hay fever, allergies, and asthma. About half think it helps heart trouble and a small, yet surprisingly large, number think it helps common colds.

Table 1—Air Conditioning and Health

Air Conditioning Helps Persons Suffering From:		Percentage of Families Non-Air Conditioned*	Air Conditioned*
Heat Rash	—Yes	76	86
	No	3	1
	Don't Know	21	13
Hay Fever	—Yes	76	84
	No	6	1
	Don't Know	18	15
Allergies	—Yes	75	82
	No	9	3
	Don't Know	16	15
Asthma	—Yes	73	74
	No	6	2
	Don't Know	21	24
Heart Trouble	—Yes	47	46
	No	9	4
	Don't Know	44	50
Colds	—Yes	9	20
	No	61	38
	Don't Know	30	42

*Non-air conditioned indicates families currently living in non-air conditioned homes. Air conditioned indicates families currently living in air conditioned homes.

"Some individual purchases of air conditioners probably are due to one of these factors. Moreover, it provides an allergy sufferer a neat rationalization for his general comfort; that is he can buy for medical reasons and get his comfort as an extra bonus," suggested Dr. Blankertz.

Better Sleep Potent Sales Appeal

"During any heat wave an even more common and potent sales appeal for air conditioning is for "better sleep." Table 2 indicates strong differences in reaction among the *haves* and *have-nots*. More than two-thirds of those with central air conditioning think it greatly improves sleeping as do less than one-fifth of those without any air conditioning. Husbands view air conditioning in this regard even more favorably than wives.

"If this were the only evidence, one might wonder if the *have-nots* are merely expressing sour grapes and the *haves* trying to justify their possession of air conditioning. That this is not the whole story by any means is indicated by Table 3, which shows that many little 'home remedies' proposed by the unfortunates in the warm month of July, 1958," he said.

"Sleeping outside, on the floor, or with a wet cloth on one's face may be useful ideas on a torrid night, although 'Go to bed early' and 'Go to bed late,' as well as 'Get tired,' and 'Don't work too hard' are confusingly wide choices. Note also how Mother Experience in this day of technology sweeps most of these remedies away with the simple injunction: 'Get air conditioning.' As an aside, it might be remarked that although Mr. Kinsey did not include air conditioning in his famous studies perhaps he should have.

Other Summer Benefits Cited

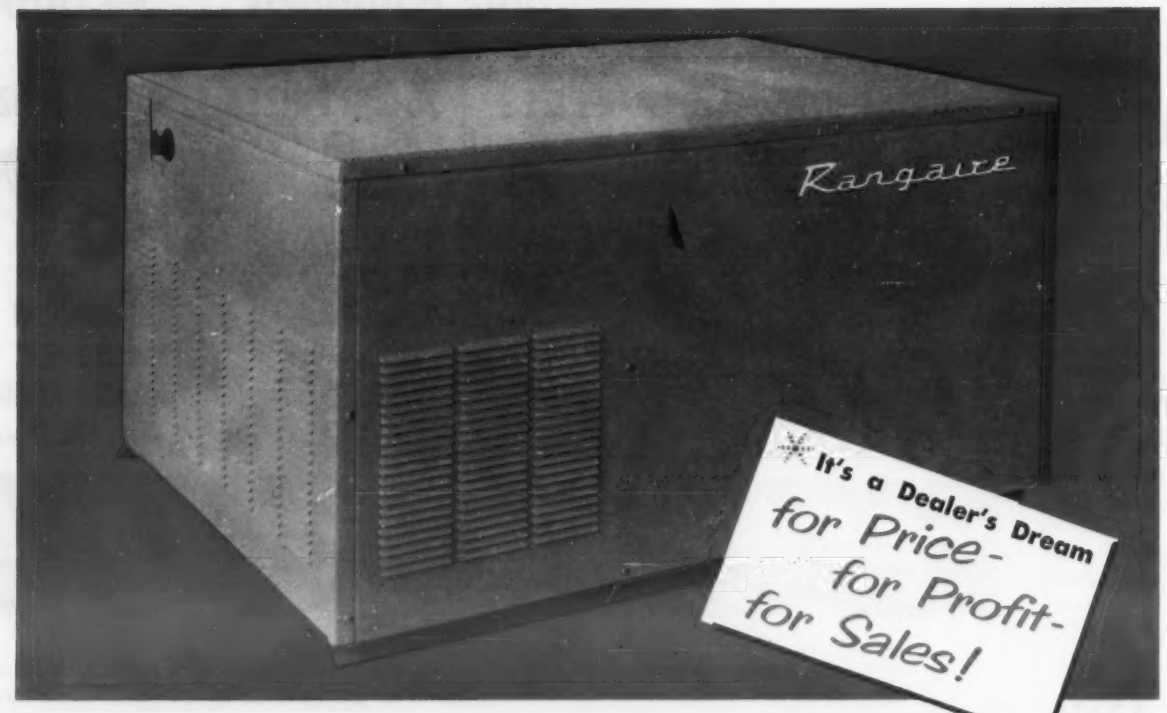
"Although time does not permit consideration of the many other special factors, some of them may be mentioned in passing. Air conditioning improves family appetites and the acceptance of hot meals during the summer; it increases the amount of home entertainment during the summer and has an effect on recreational habits; it

(Continued on Page 8)

Where Competition's Hot...

Cool 'em with

Rangaire



Rangaire Has the Extras that Mean More Sales

Imagine! air conditioning that costs less to install, less to operate (up to 30 per cent less) than competitive brands. It's a dealer's dream come true. And on top of that, Rangaire has lots more sales-paced extras to cool the hottest competition. Just look at them!

A Complete Line Of Units To Fit Every Need
A Price To Fit Every Budget
Easy Installation — Completely Packaged
Color Harmonized — Cabinet Blends Into Surroundings
All Components, Extra Large Capacity
Proved In Nation's Heat Belt
Extra Long Life
Factory Guaranteed

A Rangaire dealer-franchise makes good sense because Rangaire dealers have what it takes for sales.

Get the Facts-

Fill out and mail the coupon today!

COBELL INDUSTRIES INC.
CLEBURNE, TEXAS

Please send complete information on Rangaire franchise.

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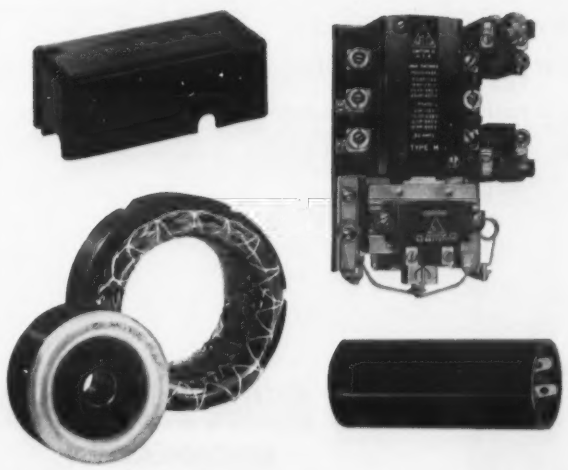
YOU CAN DEPEND ON DELCO FOLLOW-THROUGH

Delco hermetic motors are backed by customer service representatives trained to stop trouble before it starts

Spotting trouble before it happens is an important part of Delco's follow-through. Traveling customer service representatives have often made suggestions that have helped customers trim costs and keep production flowing at a steady rate. This extra service is typical of Delco's way of doing things.

All hermetic motors are precision made to your specifications, under a strict quality control system. This is your assurance that the fiftieth or five-hundredth motor you order will be identical to the first—and all of them the best hermetic motors it's possible to produce. Why don't you call your nearby Delco Products Sales Office and see for yourself why Delco motors are so popular with so many users.



In addition to hermetic motors, Delco makes a wide range of controllers, relays and capacitors for the refrigeration industry.

GM GENERAL MOTORS DELCO DAYTON, OHIO

DELCO MOTORS

Delco Products, Division of General Motors, Dayton, Ohio

- APPLIANCE MOTORS
- INDUSTRIAL MOTORS
- HERMETIC MOTORS AND CONTROLS
- GENERATORS

Public Likes It--

(Continued from Page 6)

decreases the amount of housecleaning needed and reduces the frequency of need for redecorating the home; it encourages families to take their vacations at home or to take shorter vacations away from home during the summer; and it is a conversation maker.

"On vacations, for example, 15% of non-air conditioned families expected to be away 16 or more days during the summer as did only 5% of families with air conditioning," Dr. Blankertz found.

"Table 4 contains partial evidence of this affect of prior exposure.

"The probabilities of a family which has experienced air conditioning having it in a new home is more than three times greater than for a family without such prior exposure. (Moreover, many of the families that had it before and do not now show clear signs of regret.)

"One way of indicating this is the order of preference among families for various durable goods. Very early in the questionnaire, before the purpose of the interview was clear, respondents were asked: 'If you had just bought a new home and had none of the following four items, in what order would you most likely buy them?' The items listed were: clothes dryer, food freezer; air conditioner; color television. The results are shown in Table 5.

Table 2—How Air Conditioning Does (Might) Affect Sleep

	Percentage of Families	
	Non-Air Conditioned	Air Conditioned
HUSBANDS		
Improve greatly	19	72
Improve a little	47	21
Make no difference	26	7
Disturb a little	4	0
Disturb greatly	4	0
Total	100	100
WIVES		
Improve greatly	15	67
Improve a little	33	17
Make no difference	46	10
Disturb a little	4	3
Disturb greatly	2	3
Total	100	100

Table 3—"The best way to get a good night's sleep is . . ."

	Number of Families	
Responses	Non-Air Conditioned	Air Conditioned
No trouble, doesn't bother me, etc.	36	14
Get tired out, work hard, exercise	10	7
Not to work too hard	1	0
Get to bed early	8	3
Go to bed late	1	0
Get cool	8	11
Have, turn on, etc.—air conditioning	16	82
A cool place or night	6	1
Take a cold shower, bath, etc.	9	1
To relax	8	7
Open windows	3	1
Keep windows closed	1	0
On the floor	2	0
Sleep outside	1	0
Ventilate, fan, breeze	4	1
Wet cloth on face	1	0
Other	7	4
No Answer	19	11
Total	141	143

"The influence of exposure appears very frequently in the evidence gathered. Another example is provided by the answers to a question about moving to a new home within the same general climatic zone: Table 6. Exposure to living in central air conditioning seems to have markedly increased the desire for it.

"The results revealed the expected greater preference for air conditioning in warmer climates. Yet 83% of the non-air conditioned families in Levittown indicated they would very much like to have air conditioning if they lived in New York. This is the same climatic zone!

Have-Nots May Want It More Than They Admit

"The desire for air conditioning, in short, may be much greater that the have-nots usually like to admit. Moreover, their resistance to it is likely to decrease once they have had the experience of living with it," Dr. Blankertz predicted.

"Those familiar with David Reisman's *The Lonely Crowd* and the chapters in William Whyte, Jr.'s *The Organization Man* dealing with suburban living patterns would not be surprised to find some social stress between the *have* and *have-not* groups. Again a form of projective technique, the sentence completion test, was used. Respondents were asked to complete a number of incomplete sentences including this one: 'People who have air conditioning in their homes. . . .'

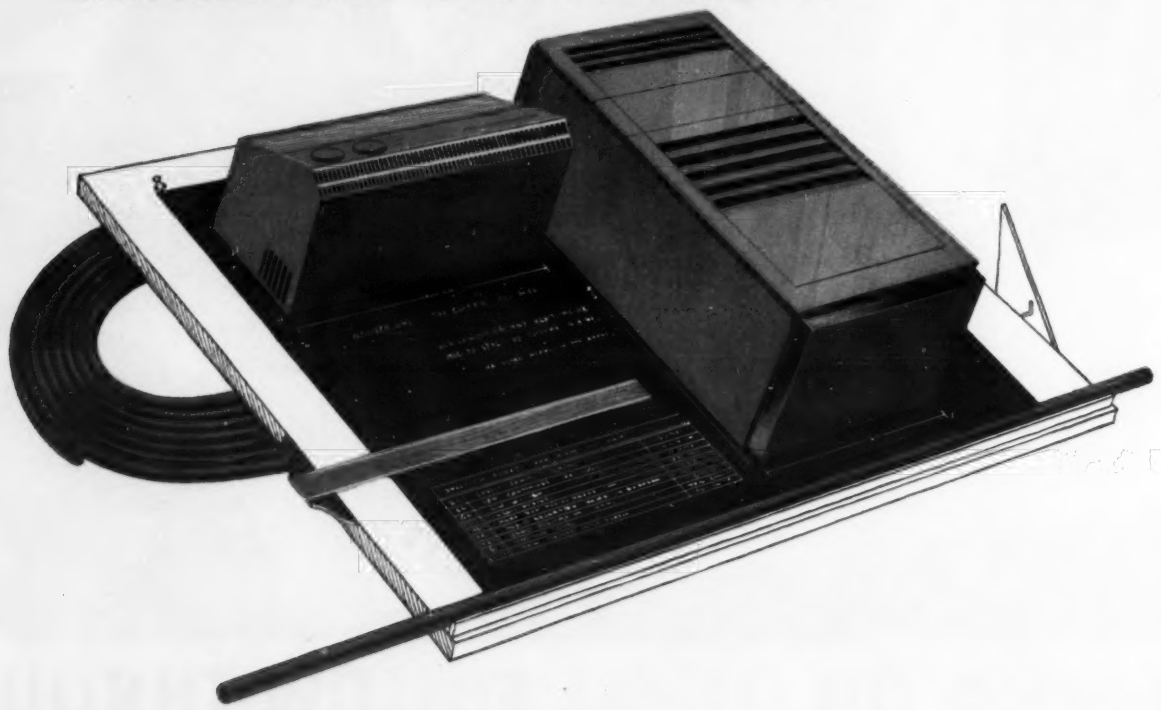
"The most frequent completions were 'are damn lucky,' or 'are lucky' or 'are fortunate.' Most revealing were some of the qualifying statements by non-owners: 'Are fortunate but are apt to be slightly anti-social,' 'Are inconsiderate,' 'Have more money than we have,' 'Make me jealous,' etc.

Owners Steer Clear of Non-Cooled Homes

"And, indeed, it seems clear that owners of air conditioning do stay clear of friendships with non-owners of air conditioniing to a considerable degree. Who wants to leave his air conditioned home on a hot evening to have dinner with a family not having air conditioning? And the pressures of little Johnny asking, 'Mommy, why don't we have air conditioning, too?' can-

(Concluded on Page 10)

For your
REFRIGERATION, AIR CONDITIONING
and HEATING UNIT NEEDS . . .



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Air Conditioning, Heating & Refrigeration News, March 9, 1959

By C. B. Ramsdell, Manager—Marketing, Air Conditioning Department, General Electric Company

FIRST PROGRESS REPORT
on General Electric Air Conditioning Dept.
CUSTOMER SATISFACTION Program...

1500 DEALERS SIGN FOR FIRST SEMESTER OF GENERAL ELECTRIC'S TECHNICAL TRAINING COURSE

We at General Electric have promised our dealers a 3-point program in CUSTOMER SATISFACTION based on (1) good products, (2) good application, installation, service, (3) good selling. Good products—that keep your service problems at a minimum have always been General Electric's objective. 1959 is no exception. Our new line of Whole-House and Zone-by-Zone Air Conditioning units is designed to meet all the requirements for homes, stores, offices and small plants.

And I'm pleased to announce that the second point of our program is meeting resounding success. 1500 of our dealers have pledged their support by signing for the first semester in General Electric's course in technical training for good application, installation and service. They have come from all over the country. Factory-training courses are being conducted in 35 cities from coast to coast. Classes began on January 19th.

The first semester covers all the fundamentals of air conditioning. *Comfort. Heat transfer. Air distribution. The refrigeration cycle. Piping. Electrical.* After that comes a home study course, followed by the second semester. 600 first-semester students have already signed for the second—which will be held at 5 permanent schools in Linden, N. J., Atlanta, Dallas, Los Angeles and Kansas City. Students who successfully complete the course will be awarded General Electric's "Certificate of Merit" signifying "a fully qualified and registered service specialist in air conditioning."

What about sales training?

Realizing the importance of selling in bringing about the boom in air conditioning, General Electric has launched an extensive sales training course designed to gain 100% CUSTOMER SATISFACTION through better selling—easier selling—more effective selling—more profitable selling. This course will show why people buy—how people buy—how to step up your selling power—how to hire, compensate and supervise salesmen—and many more valuable sales lessons. This program will give General Electric dealers the most effective sales training in the industry.

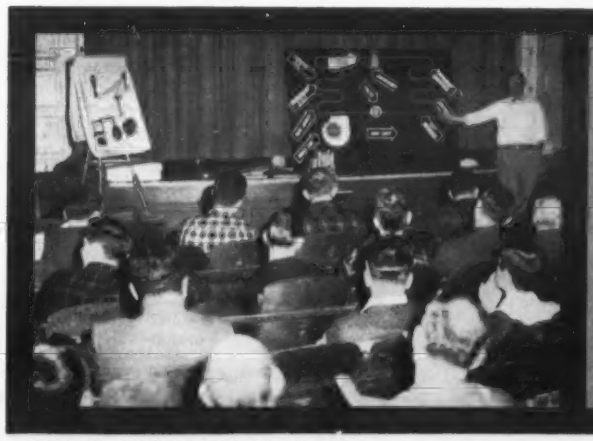
Get your share of Air Conditioning profits

Now—Get complete information about General Electric's CUSTOMER SATISFACTION program for '59. See your General Electric air conditioning distributor—or mail coupon today. Meanwhile, watch for further progress reports in this publication.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Tyler, Texas



A typical General Electric training class in progress

Dealers successfully completing the course are awarded this certificate signifying a fully qualified and registered service specialist

General Electric Company
Air Conditioning Dept., Tyler, Texas
Attn. Mr. C. B. Ramsdell, Manager—Marketing

Please send me, without obligation, complete information on General Electric's 1959 Customer Satisfaction Program. I specialize in:

☐ Home heating and cooling. ☐ Commercial and industrial air conditioning. ☐ Both.

Name_____

Firm_____

Address_____

City_____ Zone___ State_____

Table 4—Lived In Homes with Air Conditioning Before

	Families Non-Air Conditioned		Air Conditioned		Total	
	No.	%	No.	%	No.	%
Lived in Air Conditioned Homes ...	15	11	50	38	65	24
Did not	125	89	83	62	208	76
No answer	1	....	10	....	11	....
Total	141	100	143	100	284	100
Of those who did live in air conditioned homes, type of air conditioning was:						
Central	4	29	10	20	14	22
Room	11	71	41	80	52	78
No answer	0	....	0	....	0	....
Total	15	100	51*	100	65*	100

*One family had lived before in a home with central air conditioning and a home with a room air conditioner.

*Table 5—For New Homeowners Choice of an Air Conditioner Would Be**

Air Conditioner	Percentage of Families Non-Air Conditioned	Air Conditioned	Total
1st choice	4	31	18
2nd choice	26	40	33
3rd choice	53	25	38
4th choice	17	4	11
Total	100	100	100

*Other durables: Clothes Dryer, Food Freezer, and Color Television.

Table 6—If Moved to Another Home In Same Climatic Zone Would:

	Percentage of Families Non-Air Conditioned	Air Conditioned
WIVES		
Insist on air conditioning in new home ..	5	33
Prefer to have air conditioning	35	61
Not care	47	6
Prefer not to have air conditioning	13	0
Total	100	100
HUSBANDS		
Insist on air conditioning in new home ..	3	37
Prefer to have air conditioning	57	56
Not care	25	7
Prefer not to have air conditioning	15	0
Total	100	100

In missiles and millinery shops, movies and map centers . . .

Rising slowly on a column of flame, a giant guided missile lifts from its launching pad. Air-conditioning plays an important part in the manufacture and assembly of missiles by protecting intricate parts against temperature and humidity variations.

You'll find

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SUPER-DRY REFRIGERANTS

Filling the Air-Conditioning and Refrigeration Needs of Modern America

In thousands of different air-conditioning and refrigeration applications, you can count on "Genetrons" for top performance. These refrigerants are universally accepted for use as original or replacement charge. Leading manufacturers, refrigeration engineers and air-conditioning and refrigeration wholesalers approve, specify and recommend them. They offer unexcelled quality and dryness . . . and their strict specifications are consistently *bettered* in production.

"Genetron" Super-Dry Refrigerants are available from wholesalers everywhere, coast to coast. See your wholesaler. Ask for "Genetron"!

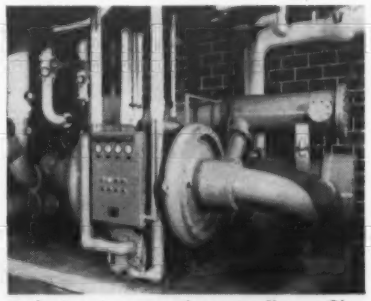
genetron 11 ORANGE LABEL CCl_3F TRICHLOROMONOFLUOROMETHANE
genetron 12 WHITE LABEL CCl_2F_2 DICHLORODIFLUOROMETHANE
genetron 22 GREEN LABEL $CHClF_2$ MONOCHLORODIFLUOROMETHANE
genetron 113 PURPLE LABEL $C_2Cl_3F_3$ TRICHLOROTRIFLUOROETHANE
genetron 114a BLUE LABEL $C_2Cl_2F_4$ DICHLOROTETRAFLUOROETHANE

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

No fuss—but plenty of feathers as milady tries on one hat after another in her air-conditioned millinery shop.

Part of the show in our modern American movie theatres is comfortable air-conditioning. Movie managers have learned that the "air-conditioned" sign on a theatre marquee is good for business.



At the Army's map service center, Kansas City, Missouri, this 100-ton refrigeration unit helps control temperature and humidity. The paper, plastic and film used in map-making require precise temperature and humidity control. *The Trane Company Photo*

Public Likes It--

(Concluded from Page 8)

not be ignored. In the suburban vales of conformity such social pressures are an added force for further air conditioning development," believes Dr. Blankertz.

"Statistics are fine, but they are only a means to approach the truth. In fact one of my favorite definitions is that statistics is like a bikini: what it reveals is interesting, but what it conceals is vital.

"Which is another reason why I am pleased to be addressing an audience devoted to articulation and concise expression. Air conditioners are simple mechanical contrivances which do a few tricks with air: they cool it, take out moisture, and eliminate air contaminants. From these changes come—a new way of life," he declared.

"Such at least is my major conclusion. (I also believe that women are the principal agents in buying decisions about air conditioning and that the greater energy which women secure, their feeling more like doing their housework, is a central, important fact in the new way of life.) Families with central air conditioning enjoy good dispositions, better husband and wife relations; the family is more cheerful and is happier; there is a keener sense of relaxation and of enjoyment of meals and guests; and the wives have more energy for housework and for living.

Some Sales Arguments From Satisfied Users

"But how is one to portray such a change in the life style? How dramatize the joys of a stay-at-home vacation? How make baking a cake during a heat wave a vision of pleasure? I leave it to you to find the phrase, or slogan, which best can portray these major factors in air conditioned living. For your aid I pass on some comments of Levittown owners of central air conditioning:

1. "Anybody who can afford it and doesn't is an idiot."
2. "We just love it!" "Now that we have it and could afford it, we wouldn't be without it. It's terrific!" "It's just wonderful. I would not want anything else. I'm sold on it."
3. "Not thrilled with it—until we moved in."
4. "It's just as important as heat in the winter."
5. "I didn't expect that I would get such a bang out of it."
6. "The heat doesn't affect humors, eating habits, sleeping, etc."
7. "Live normal all year around and cook easier."
8. "It's just comfort — just lovely — just out of this world."
9. "Life saver during pregnancy." "Sleep better. Wonderful. Housekeeping easier. Dispositions better."
10. "Everybody's happy." "I don't feel tired at the end of the day."
11. "The 'living.'"

"Corrosion." By Frank J. Versagi—50¢ each.

Get your copy Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

My client's cooler, my wallet's fatter, ...now we've both got Chrysler Air Conditioning

"Why am I happier selling Chrysler Packaged Air Conditioning? Because I sell more—and make more on what I sell. I'm handling the most complete line in the industry. Since I can always get the exact unit for any job, my quotations are consistently lower. And Chrysler engineering know-how saves me time and money on installation . . . cuts service call-backs to the bone."

"My boss was a push-over for Chrysler Air Conditioning. It's got everything he wanted . . . and then some. Like all-weather operation. With this Chrysler exclusive, whether it's 120° above, or 5° below—we've got Spring."

"I specified Airtemp for my building for many good reasons. Dependability—assured by Chrysler's 25 years leadership in packaged air conditioners. Economy—from their new Power Miser Compressor. Safety—Chrysler includes, as standard, features most manufacturers don't offer, even as extras."

The Chrysler Story has a happy ending for everyone: contractor, owner, and user. Why not have your local Airtemp distributor tell it to you? Or write: Airtemp Division, Chrysler Corporation, Dept. H-39A, Dayton 1, Ohio.

CHRYSLER
AIRTEMP

FIRST WITH THE FINEST IN AIR CONDITIONING

Heat Pumps Provide 'Economical' Installation For Bowling Alley with Adjoining 'Laundromat'

MOBERLY, Mo. — The Community Lanes Bowling Center here, a 16-lane bowling alley with an attached self-service laundry, features a heat pump installation.

The installation was handled by Bill Smith Refrigeration Co. here.

"We used four 5-hp. General Electric 'Weathertron' heat pumps and one 5-hp. General Electric air conditioning unit," Bill E. Smith reported in describing the installation made by his firm.

"We suspended the air handling sections from the ceiling and located the condensing units directly above on the roof. Therefore we had an economical installation with an approximate run of 6 ft. of refrigeration lines.

FOUR Weathertron heat pumps and one air conditioner provide year-round comfort in the Community Lanes Bowling Center in Moberly, Mo. An extra source of heat was furnished by the boilers from an adjoining self-serve laundry.

"Our condensate drains run through the outside wall into a flower and shrubbery bed which tends to provide moisture for the flower bed in the summertime."

Smith continued:

"Four of these units have the plenum chamber and grille, as illustrated, and the other one has ductwork supplying five various rooms and offices.

"On this installation, we are inducing fresh air through four of the units.

"Behind the automatic pin setters, we installed two 15,000-watt Chromalox unit heaters. We also have installed three RF240 4,000-watt Chromalox unit heaters as supplementary heat in the nursery and offices.

"Also as an extra source of heat, we are utilizing the heat generated by boilers in the 'Laundromat' by use of a small exhaust fan, thermostatically controlled, blowing this air into the bowling area."

Smith pointed out that Missouri Power & Light Co. is "giving us a rate of 1¾ cents per KW for electrical heating.

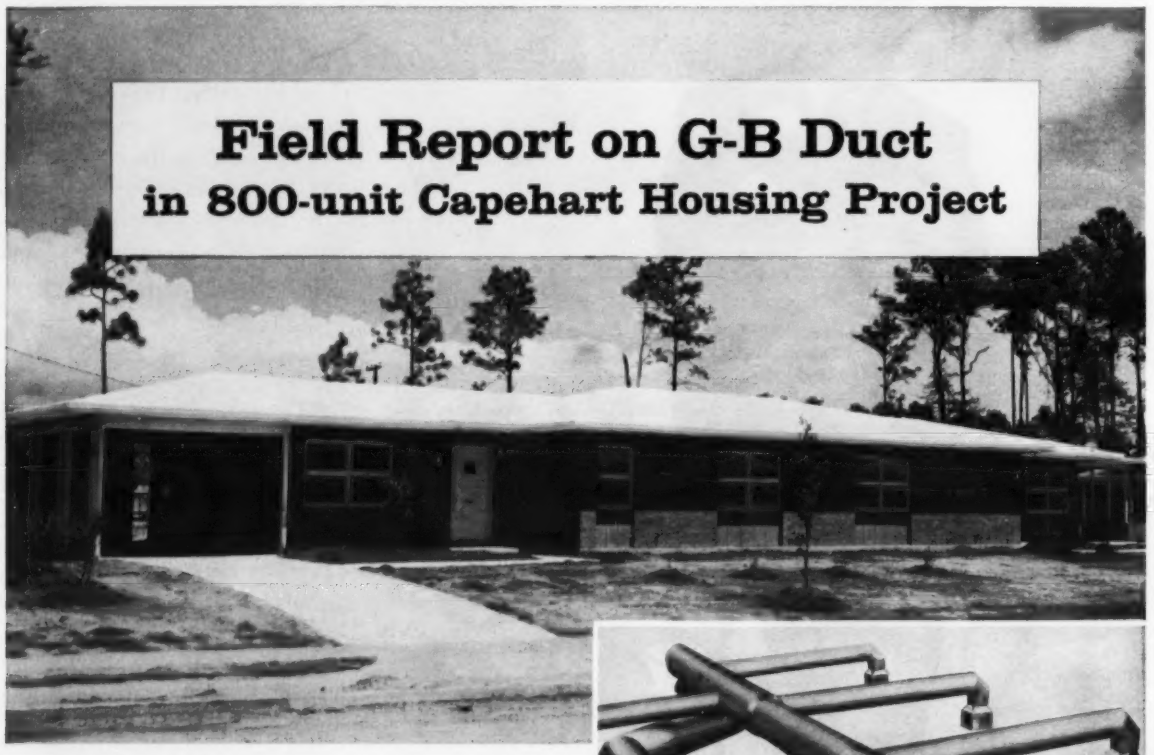
"Although our operating cost is running somewhat higher than was anticipated, we believe that we are providing better temperature control than we would have had on our original plan.

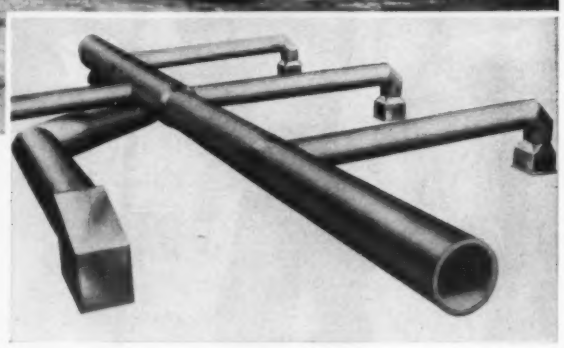
"By installing electric heat, we were able to save the customer $2,000 from the original plan."

'Hot' 'Spotaires'

WEST COVINA, Calif. — Police were looking for thieves who stole some 40 Drayer-Hanson "Spotaire LRC" units from the Caravin Inn here.

Also anxious for any information about these items was the J. Herman Co., Inc., contractor on that job.





Job location: Myrtle Beach Air Force Base, S. C.

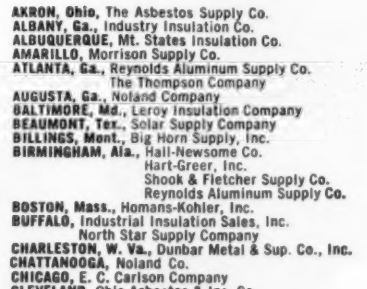
Contractor: Air Conditioning Supply Co., Winston-Salem, N. C.

"We are pleased to report that G-B Duct is living up to our expectations in the 800-unit Capehart Housing Project," says Mr. Sam W. Turner, Air Conditioning Supply Co., Winston-Salem, N. C., "and is performing very satisfactorily with the Westinghouse heat pump units. Our low bid for this project was based, in part, on our belief that even though the initial cost of G-B Duct is slightly higher, installation savings soon make it the most economical insulated duct system."

Have *you* tried GB-Duct?—the first and only prefabricated round glass fiber duct tested and labeled by Underwriters' Laboratory as an air conditioning and heating duct. Here's how it saves you time and money: G-B Duct comes in one-piece 6′ sections, ready to use—no preassembly, no folding. It's easy to cut and fit with a knife and the templates provided. Sizing is no problem because G-B Duct is made in the same nominal sizes as round sheet metal pipe and fittings.

With G-B Duct you get a neater, better job—faster. Uniformly thick glass fiber walls provide positive thermal insulation and maximum sound absorption, while the continuous airtight plastic vapor barrier sleeve positively prevents condensation.

For name of your nearest supplier, see adjoining column



G-B DUCT DISTRIBUTORS

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ALBANY, Ga., Industry Insulation Co.
ALBUQUERQUE, Mt. States Insulation Co.
AMARILLO, Morrison Supply Co.
ATLANTA, Ga., Reynolds Aluminum Supply Co.
The Thompson Company
AUGUSTA, Ga., Noland Company
BALTIMORE, Md., Leroy Insulation Company
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BILLINGS, Mont., Big Horn Supply, Inc.
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Hart-Greer, Inc.
Shook & Fletcher Supply Co.
Reynolds Aluminum Supply Co.
BOSTON, Mass., Homans-Kohler, Inc.
BUFFALO, Industrial Insulation Sales, Inc.
North Star Supply Company
CHARLESTON, W. Va., Dunbar Metal & Sup. Co., Inc.
CHATTANOOGA, Noland Co.
CHICAGO, E. C. Carlson Company
CLEVELAND, Ohio Asbestos & Ins. Co.
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CORPUS CHRISTI, Precision Insulation Co.
DALLAS, Insulation Supply Co.
Payne-Ladewig, Inc.
DECATUR, Ga., Lennox Industries
DENVER, Gene Wright Lumber Co.
DES MOINES, Iowa Asbestos Company, Inc.
DETROIT, G. L. Johnston Co.
ENGLEWOOD, N. J., Englewood Supply Co.
EVANSVILLE, Ind., George Koch Sons, Inc.
FT. WORTH, Bracken Co.
GULFPORT, Miss., Paine Supply Co.
HOUSTON, Precision Insulation Co.
INDIANAPOLIS, Central Supply Co.
JACKSON, Miss., Paine Refrigeration & Supply Co.
JACKSONVILLE, Ferber Sheet Metal Works
Florida Air Conditioners
Reynolds Aluminum Supply Co.
Southernair Distributors
KANSAS CITY, Mo., Central Supply Co.
Superior Distributing Corp.
KNOXVILLE, Tenn., Holston Air Conditioning Corp.
LAKE CHARLES, La., Solar Supply Company
LAREDO, Tex., Anderson-Sturgis Company
LITTLE ROCK, Gunn Distributing Co.
LOS ANGELES, Western Fibrous Glass Products Co.
LOUISVILLE, General Insulation & Roofing Co.
LUBBOCK, Tex., Morrison Supply Co.
MACON, Ga., Industry Insulation Co.
MEMPHIS, A. T. Distributors, Inc.
MIAMI, Crabtree Insulation Co.
Fiber Duct Dist.
Reynolds Aluminum Supply Co.
MYRTLE BEACH, S. C., Air Conditioning Supply
NASHVILLE, Central Air Conditioning & Heating Co.
Reynolds Aluminum Supply Co.
NEW ORLEANS, Eagle Asbestos & Packing Co.
Solar Supply Co.
NEW YORK, Eastern Steam Specialty Co.
OMAHA, Cardinal Supply & Mfg. Co.
ODESSA, Tex., Morrison Supply Co.
PASSAIC, N. J., Ral Supply Co.
PHILADELPHIA, John F. Scanlan, Inc.
PHOENIX, Kircher Asbestos & Rubber Co.
PITTSBURGH, Dravo Corp.
RALEIGH, N. C., Reynolds Aluminum Supply Co.
RICHMOND, Va., Automatic Equip. Sales Co., Inc.
Reynolds Aluminum Supply Co.
ROCHESTER, N. Y., Rochester Oil Burner Company
ROCKFORD, Ill., Mott Brothers Co.
SALT LAKE CITY, Bullough Asbestos Supply Co.
SAN ANTONIO, The Bracken Company
SAN DIEGO, Western Fibrous Glass Products Co.
SAN FRANCISCO, Western Fibrous Glass Products Co.
SAVANNAH, Ga., Reynolds Aluminum Supply Co.
SEATTLE, Western Fibrous Glass Products
SHREVEPORT, La., Frith Sales Co.
SOUTH BEND, Place & Co.
ST. LOUIS, Hollander & Co., Inc.
SULLIVAN, Ill., Lewie David, Inc.
TALLAHASSEE, Baker's, Inc.
TAMPA, Eagle Roofing & Art Metal Works, Inc.
TULSA, Okla., Ball Distributing & Engr. Co.
VANCOUVER, B. C., Fleck Brothers Limited
WASHINGTON, D. C., Walter E. Campbell Co.
WINSTON-SALEM, N. C., Air Conditioning Supply

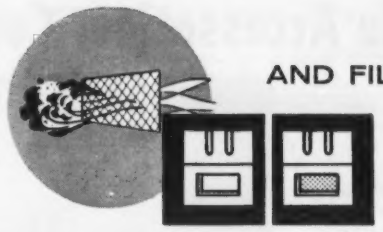
GUSTIN-BACON *Manufacturing Company* GUSTIN gb BACON

218 W. 10th St., Kansas City, Mo.

Thermal and acoustical glass fiber insulations . . . molded glass fiber pipe insulation . . . couplings and fittings for plain and grooved end pipe

WITH ELECTRO-MAGNETIC FILTER

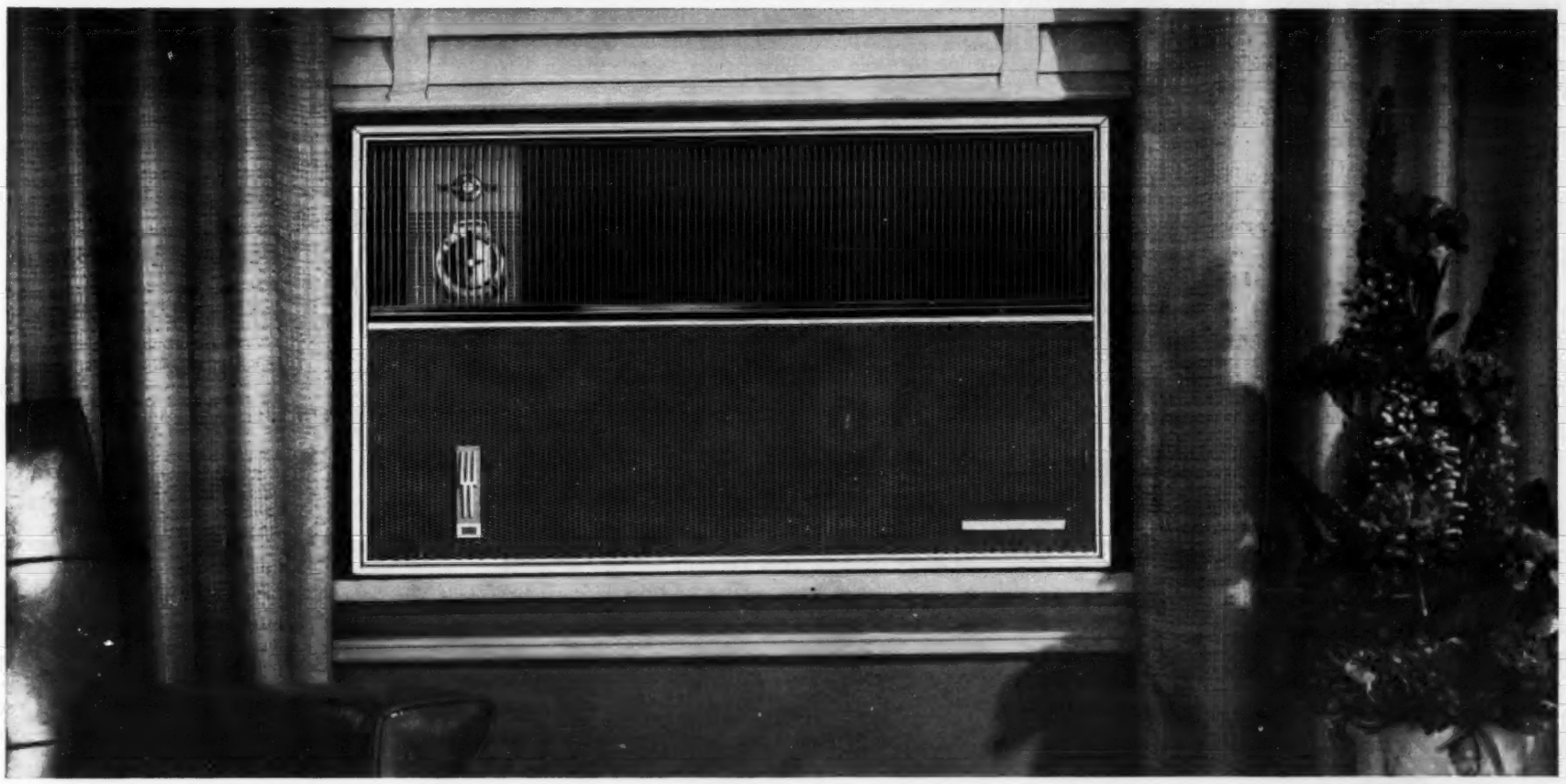
Removes up to 99.5% of harmful dirt, dust and pollen as compared to 65% for ordinary filters! Operates on an entirely new electrostatic principle.



AND FILTERMATIC SIGNAL:

Tells automatically when the Electro-Magnetic Filter needs cleaning! Signal shows "white" when it's clean . . . changes to "red" when it's dirty.

Kelvinator Gives You The Greatest Room Air Conditioner Sales Story In A Decade!



NEW 1959 KELVINATORS give you the first really fundamental advance in room air conditioner design in a decade! With Electro-Magnetic Filter and Filtermatic Signal, they provide the ultimate in air cleaning . . . and an unmatched sales story! "*Masterpiece*" *Models* (above), in 1, 1½, 2, 2½ H.P. sizes, also include adjustable automatic thermostat, fresh air intake and room air exhaust, two-directional cooling, two-speed fan. *Custom Models* in 1½, 2, 2½ H.P. sizes, with deluxe features but standard filter, sell at budget prices. Profit with the sales advantages only Kelvinator can give . . . contact your Kelvinator representative today for full details of these remarkable new room air conditioners.

FULL ½ H.P. PORTABLE DELIVERS 4200 BTU'S

Ideal bedroom size! And it includes a simple dial-operated automatic thermostat, plugs into any 115-volt outlet. Compact size fits any standard window.

"SPACE SAVERS" ONLY 23″ WIDE, 14″ HIGH

. . . with low, low prices! Three 1 H.P. models: 115 volt, 7½ amp.; 115 volt, 12 amp.; and 230 volt. Each features two-directional cooling, two-speed fan, fresh air intake.

"Balanced-Comfort" Design provides all four freedoms of true air conditioning!

- **MORE FREEDOM FROM HEAT!** Correct balance between all parts of the system assures top cooling capacity!
- **MORE FREEDOM FROM HUMIDITY!** Carefully balanced cooling coils wring more moisture from the air!
- **MORE FREEDOM FROM FAULTY CIRCULATION!** Powerful fans and two-directional control give balanced air flow!
- **MORE FREEDOM FROM DIRT, DUST AND POLLEN!** Electro-Magnetic Filter and Filtermatic Signal provide the cleanest possible air!

Built Better to Serve Better

LIVE BETTER ELECTRICALLY

AMERICAN MOTORS MEANS MORE FOR AMERICANS

Kelvinator

Division of American Motors Corp., Detroit 32, Mich.

Packaged Unit with Suitable Accessories, Controls Meets Testing Lab Needs

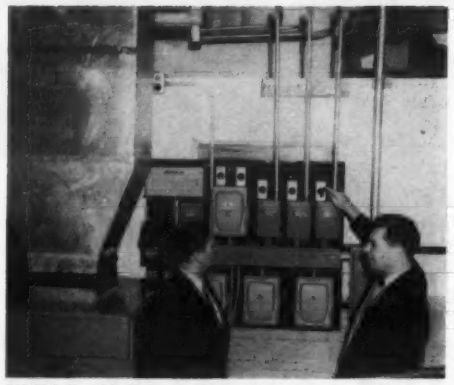
Installation Provides Heating, Cooling, Humidification, and Dehumidification

NEW YORK CITY — How a modern, package air conditioner, combined with suitable accessory equipment and controls, can provide temperature and humidity conditions within narrowly prescribed limits, is demonstrated in an installation for the City of New York Central Testing Laboratory.

The laboratory, which is under the general jurisdiction of Commissioner of Purchase Joseph V. Spagna, is an important part of the city's purchasing system.

The city of New York purchases in the open market from the lowest qualified responsible bidder. All purchases are against a competitive specifications and affects all qualified vendors. Thus a sample of the material is submitted to the Testing Laboratory for approval and for this purpose it is important to have the best available material and testing equipment.

In the installation, made by Modern Air Conditioning & Refrigeration Service, the principal components are a Westinghouse 3-ton package type air conditioner; an electric blast duct heater; and two Walton atomizing humidifiers. The new system is in keeping with the modern advanced methods employed by the Department of Purchase of the City of New York and Nicholas A. Demaio, chief of the Bureau of Standardization, who insists on maintaining a highly efficient laboratory and modern equipment.



HENRY R. ZUNIGA, engineer (left) stands next to air conditioner which is located outside of conditioned area while Joseph Galletta, owner of Modern Air Conditioning checks over the control panel. Electric lights indicate when each circuit is on.

PAUL JONES, senior chemist, checking the thread count of a piece of material cut from an official Flag of the City of New York, which was submitted to the laboratory for tests. Directly above him are four controls for heating, cooling, humidifying, and dehumidifying.

The specifications for the system called for the textile room in the Testing Laboratory to be air conditioned for testing textiles, rope, paper, batteries, paints, lacquers, greases, and various plastic materials.

Atmospheric conditions to be maintained in the testing rooms the year-round are:

(a) 70° F. dry-bulb temperature, 65% R.H., for textiles, rope, and other material.

(b) 73.4° dry-bulb temperature, relative humidity to be controlled for values ranging from 50 to 60% for testing paper.

(c) Tolerances to be maintained by the air conditioning unit for the above material is plus or minus 2° F. on the dry bulb, and plus or minus 2% R.H.

The installation made by Modern Air Conditioning & Refrigeration Service is a complete heating - cooling - humidification - dehumidification system to maintain the desired temperature and humidity at any time within the prescribed limits, regardless of outside conditions.

Equipment Installed Outside Testing Room

Testing room is 12 ft. by 20 ft. by 8 ft. high. It is actually a room within a room located on the 12th floor of 480 Canal St. Because of the size of the room, all the equipment is installed outside of the conditioned area.

This includes the Westinghouse model RU-32 3-ton package type air conditioner; the three-circuit electric blast duct heater with 38,000 B.t.u. capacity; and the two Walton atomizing humidifiers, each with 3-lb.-per-hour capacity.

How System Operates

The system operates in the following manner:

Refrigeration compressor in the package air conditioner is controlled by one cooling thermostat and one reverse-acting humidistat. If the room temperature rises above desired conditions the compressor will run and pull the temperature down.

If the humidity rises above the prescribed setting the compressor will run until the desired humidity condition is reached; at the same time if the room temperature drops below the desired condition, a three-stage heating thermostat will turn on one circuit at a time as needed and maintain room temperature.

The humidifiers are separately

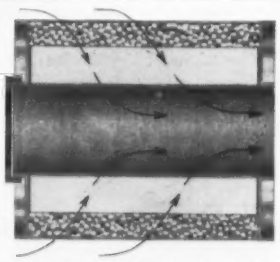
NOW... Split-Second Handling
With the New Type 75 HENRY MULTIPLE CARTRIDGE DRIERS
PATENT PENDING
FLOW
An efficient and high capacity multiple cartridge filter-drier with a drying and flow capacity range up to 125 tons.

Low Pressure Drop...No By-Pass Required

875-CMS DRI-COR® Filter-Drier Cartridges for these new driers are self-sealing and self-positioning. It requires only a few seconds to insert the cartridges into the drier shell, resulting in a minimum of exposure to the atmosphere and loss of cartridge drying capacity. Thus, the cartridges are clean, dry and complete—due to efficient design and split second handling.

The refrigerant flows uniformly over the total cartridge surface, through the desiccant bed and each filter core. This results in maximum moisture and acid removal with high flow capacity and low pressure drop.

These brass driers contain from two to five cartridges and are available with connection sizes ranging from 1⅛" to 2⅛" O.D. Solder.



CAT. No. 875-CMS DRI-COR® FILTER-DRIER CARTRIDGE WITH

1. OUTER PERFORATED BRASS SHELL.
2. BED OF GRANULAR MOLECULAR SIEVES.
3. CERAMIC FIRED DESICCANT FILTER CORE.
4. INNER DUTCH WEAVE MONEL SHELL.
5. PROGRESSIVE FILTRATION.
6. ONE SIZE CARTRIDGE FOR ALL TYPE 75 DRIER SHELLS.

HENRY VALVE CO.

MELROSE PARK, ILLINOIS (Chicago Suburb)

Cable: Hevalco, Melrose Park, Illinois

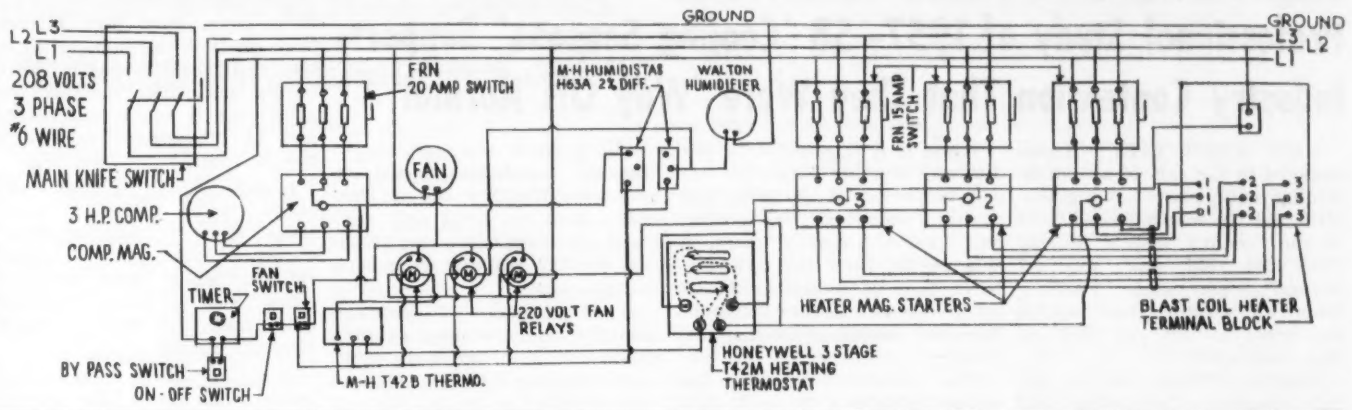
VALVES, DRIERS, STRAINERS AND ACCESSORIES FOR REFRIGERATION, AIR CONDITIONING AND INDUSTRIAL APPLICATIONS

controlled by a standard humidistat to turn on the humidifier when needed to maintain the desired humidity condition. A time clock was also installed to turn on the system automatically and to keep the system running day and night for the length of the test period which sometimes lasts three days.

For testing rope, the desired conditions are 64% R.H. with a 70° F. dry-bulb temperature. Humidity and heat must be added to the room gradually, otherwise there will be too sudden a change because of the size of the room.

That is the reason for the use of three-stage heat and the two small atomizing spray type humidifiers, states Joseph Galletta of Modern Air Conditioning. Use of the two 14-in. diffusers cuts the air velocity to a minimum and consequently the air velocity does not interfere with the operation of the delicate scales.

Electrical Circuit for Central Testing Laboratory Installation



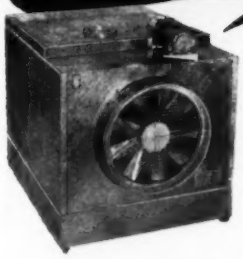
When the humidifier is in operation an evaporative cooling effect develops which tends to bring the temperature down. This is overcome by electric strip heaters that are also installed in the ductwork. A three-step thermostat controls the three electric circuits.

Ductwork takes off from the top of the air conditioner to the top of the Laboratory Room and feeds the conditioned air through two 14-in. diffusers. Ductwork is lined with 1-in. Fiberglas insulation, fresh air connects to the return air duct from the nearest outside window.

Because of the size of the room and the short run of ductwork, the introduction of humidity with one large humidifier unit caused condensation and dripping of water through the diffusers, so it was decided to use two smaller units.

One was installed in the return air duct, and another inside the room in a corner with a free blow toward the center of the room. When less humidity is needed, one unit is used.

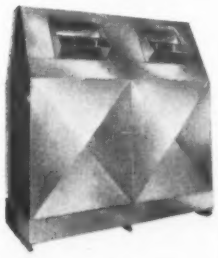
Do Your Specs Call for "STEEL COOLING TOWERS?"



Marley Makes 'em All

Marley Aquatowers®

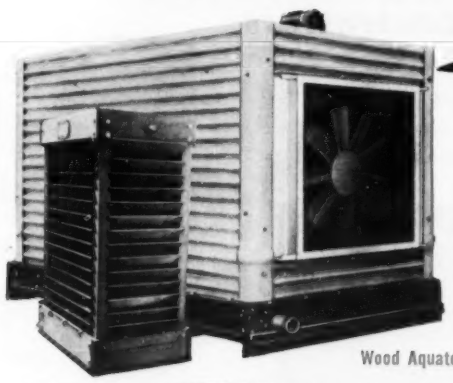
"The world's most popular packaged water cooling towers" are available in 14 models with capacities upward from 3 tons. From every standpoint —simplicity, economy, maintenance, durability and proven performance— there is nothing like an Aquatower. Lifetime wood filling and steel components, hot dip galvanized after fabrication typify the built-in quality for which Aquatowers are famous.



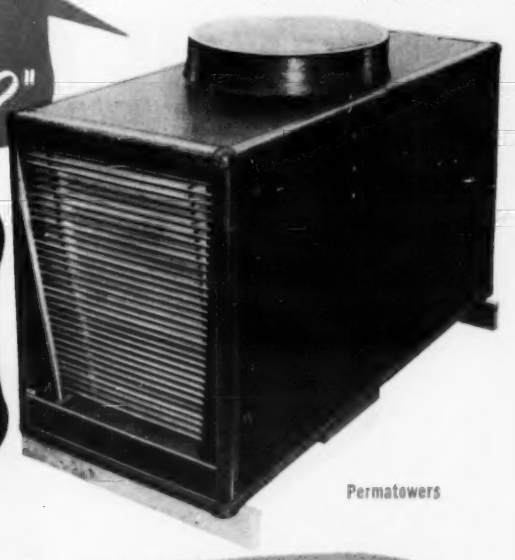
Marley AquaCoolers®

In minimum installed plan areas, indoors or out, AquaCoolers offer full capacity performance and leak-proof, whisper-quiet operation. Basins, casings and centrifugal blowers are hot dip galvanized after fabrication. Marley nozzles and wood filling provide maximum water break-up and air-water contact. Capacities range from 5 to 60 tons, nominal. Smaller models ship completely assembled; larger, in two sub-assemblies.

Do Your Specs Call for "WOOD COOLING TOWERS?"



SpraTowers



Wood Aquatowers

Marley Makes 'em All

Permatowers

SPRATOWERS®

For lowest original cost and maximum operating economy select all-redwood Marley Natural Draft SpraTowers. These ruggedly constructed towers feature Marley-designed non-clog spray nozzles for assured consistent high cooling efficiency. SpraTowers are available in capacities from 3 tons up—preassembled basins on all models up to 15 tons minimize erection time and expense. Piece-marked components and easy-to-follow instructions speed assembly.

WOOD AQUATOWERS®

Forced draft design and vertical air discharge permit these towers to be installed where towers of other designs cannot be applied. Corrosion-resistant materials — long-life redwood framing, asbestos cement board casing and hot dip galvanized steel components, minimize maintenance and assure long service life. Wood Aquatowers are shipped unassembled. Easy-to-follow erection instructions facilitate fast assembly. Rugged mechanical equipment is designed for long service with minimum maintenance. Five models with capacities from 20 to 50 tons, nominal.

PERMATOWERS®

For dollar-saving durability select the tower with the greatest resistance to corrosion — Permatower. Materials used in Permatower construction, including reinforced polyesters, phenolic and ABS copolymer type resins and protected laminates, assure long tower life under the most severely corrosive conditions.

Permatower's design and operational features are equally unique. Marley's performance-proved Double-Flow design, in packaged towers found exclusively in Marley products, provides peak cooling efficiency with operating simplicity and economy. Permatower's vertical air discharge adds two other outstanding advantages —quiet operation and suitability for location in confined areas. Industrial type mechanical equipment is designed for lasting service with minimum maintenance. Simplified internal piping assembly and water distribution system minimize installation time and expense.

Select from 11 Permatower models with capacities ranging from 5 to 75 tons, nominal.

MARLEY

The Marley Company

Kansas City, Missouri

Weather Trends, Inc.

Professional Study of 1957-'58 'Cooling Seasons' Supports Industry Contention That They Were 'Way Off Normal'

NEW YORK CITY — Those engaged in the sale of air conditioning equipment have grumbled that the weather conditions in the "cooling season" during 1958 and 1957 was "way off normal" — and some evidence from an authoritative source has come to light to back up this contention.

Weather Trends, Inc., a private weather forecasting and weather-recording organization, has made a "climatological evaluation of air conditioning weather for the key months of 1957-1958" and its findings quite generally bore out the conclusion that air conditioning salesmen didn't get much help from the weather.

While it is impossible to predict any weather trend for any specific period, at the same time weather does tend to "average out" over a period of years. If this be so, then this tendency to a law of averages should bring about hotter-than-usual Summer conditions in the near future.

The Weather Trends, Inc. studies placed a 5, 4, 3, 2, 1 rating on the air conditioning "sales climate" for 32 major U.S. cities, with the numbers having the following meanings:

5 — Superior
4 — Favorable
3 — Near Normal
2 — Unfavorable
1 — Poor

All ratings are related to "normal" conditions based on long-term Weather Bureau records. Also reviewed and analyzed, and taken into consideration for the ratings, were such matters as:

1. Departures of average monthly temperatures, average maximum, and average minimum readings for each city and each month.
2. Number of days of 90° and over as compared to normal.
3. Duration and extent (extreme reading) of hot spells, if any, during each month.
4. A check on the number of wet days, humidity readings, and percentage of sunshine to normal to see if there were any unusual departures from normal.

The four months covered are May, June, July, and August. May of 1958 did not show up too badly, although it could hardly be called spectacularly good—one 5 (superior) rating, and 11 "favorable" ratings of the 32 total.

However, June of 1958 was a really "sour" month in many areas. Only two had "superior" conditions, four had "favorable" ratings, while there were 15 cities rated as being "unfavorable" and four with a "poor" (lowest) rating.

July of 1958 wasn't much better, with three cities getting a "superior" rating, three others "favorable" with nine designated as "unfavorable," and five as "poor."

Generally speaking, 1958 ratings were considerably worse than 1957, which had more "superior" ratings (although most of them were in July), and fewer "poor" and "unfavorable" listings.

(In future issues this year the NEWS will publish, month-by-month, the actual "air conditioning weather" evaluation for 1957-1958 for the 32 cities which Weather Trends, Inc. studied. This should be of value to those who are gearing promotional efforts to individual markets.)

"YORK 2-Section Condensing Unit
A BLUE CHIP PROFIT IDEA!"

Say Installing Contractors Coast-To-Coast!

Condenser Section Separates from or Connects to Hermetic Compressor!

YORK
Flex-O-Metic
Hermetic Condensing Units

Only Condensing Unit That Gives You All 3:

① **Blue Chip Installations**
Compressor sections are factory-wired...can be installed in multiple on racks with a single dry surface condenser to meet special needs. Receivers can be changed to a larger size for multiple fixture use or can be removed for capillary use!

② **Blue Chip Flexibility**
Compressor and condenser sections for varying models may be interchanged. That means your York Wholesaler will have the unit you need instantly available. Sections may be purchased separately.

③ **Blue Chip Service For Customers**
Cuts costly on-the-job servicing because sections may be removed in their entirety and replaced with new ones. Rotalock Valve rotates 360° for easy piping...3 service valves all have gauge ports.

Your FUTURE and FORTUNE Now Lies With YORK

"Great! Most flexible units I ever used. Saves more time and money on service and installation than I can with ordinary units!"

"I like the 'remote' feature that lets us install compressor away from condenser section without loss of refrigerant or re-brazing!"

"Wonderful! York units give me a wider selection to work with. They're available in air-, water- and air-water-cooled models from ⅓ thru 7½ H.P."

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YORK CORP. SUBSIDIARY OF BORG-WARNER CORP.
BORG-WARNER
RESEARCH & ENGINEERING
MAKE IT BETTER

Air Conditioning, Heating, Refrigeration and Ice Making Equipment • Products for Home, Commercial and Industrial Installations

Memphis Firm Books Orders for Church Air Conditioning

MEMPHIS—In recent months, Cook & Nichol Air Conditioning & Heating booked several orders for installation of packaged air conditioning and heating equipment in area churches, the firm reported.

Among the latest orders was one for the new East Frayser Church of Christ. This called for the company to install two General Electric heating and cooling systems in the church.

One 30-ton water-cooled unit will handle the main sanctuary and the lower floor of the adjoining educational building. A 7½-ton unit will serve the upstairs of the educational building. One boiler will be used in heating the entire 10,000-sq. ft. structure.

The separate systems, designed by Cook & Nichol engineers for this building, provide zone control. If the downstairs is not in use, the smaller system is put in service and vice versa, it was pointed out.

The company, which has engineered a number of church heating and cooling systems, recently was installing G-E equipment in several others. These include the White Station Baptist church, the Berclair Church of Christ, Holy Cross Lutheran, and Georgian Hills Baptist. Charjean Baptist also has a G-E system as has Frayser Baptist, it was indicated.

Cook & Nichol stresses that it offers several financing plans especially tailored with churches in mind.

Mitchell Appoints Allied Refrigeration As Service Depot

PHILADELPHIA—Allied Refrigeration Co. here announced that it has been chosen as the authorized factory service depot for all Mitchell air conditioners and dehumidifiers in this area.

Presently the firm is the service depot for Emerson, Bryant, Crane, Remington, Coolerator, Gibson, Kelvinator - Leonard, Mathes, Magic Chef, Berns Air King, and Lewyt, according to Ronald Smithey, assistant manager.

Metals & Controls Corp. Sales Up 23% for 1958

ATTLEBORO, Mass.—Metals & Controls Corp. and its wholly-owned subsidiary, M & C Nuclear, Inc., had consolidated net sales for the year 1958 of $44,395,000 and earnings after taxes of $1,868,000.

Compared with 1957, sales were 23% higher and earnings were 19% higher. Earnings in 1958 were $2.03 per share compared to $1.71 per share in 1957.

Health Factor, Pride of Ownership Seen as Neglected Areas In Selling Residential Cooling

NEW YORK CITY — When Carrier Corp. staged its recent "seminar on air conditioned living" for representatives of the nation's press, many facts and ideas of interest to the industry were developed in the question-answer session following formal presentations.

(The latter, as reported in the Feb. 23 issue of the NEWS, included talks by Dr. Donald F. Blankertz, Wharton School of Finance and Commerce; Carl Koch, well-known Boston architect; David Fox, Fox & Jacobs Construction Co., Dallas home builder; and Russell Gray, Carrier vice president.)

Only about 10% of all dwelling units in this country have air conditioning, according to Cloud Wampler, Carrier's chairman of the board.

Of the nation's 48,000,000 homes, 700,000 (1½%) have central air conditioning systems and 3,400,000 (7%) have one or more room cooling units, he said.

Of 6,000,000 apartment units, 300,000 (5%) have central air conditioning and 900,000 (15%) have one or more room units, declared Wampler.

"Carrier has more than 27% of the air conditioning installations throughout the U.S., a survey by another company has discovered," Wampler commented.

Carrier expects to market its new gas absorption type air conditioner in limited quantities in 1959. During 1958 a considerable number were installed on a test basis.

While the first cost of a gas absorption unit runs about 25% more than a conventional electric air conditioner, the operating cost can be "quite a bit less," depending on such factors as utility rates, of course, Wampler said.

"This saving in operating costs is generally sufficient to offset the first cost in three to five years," he added.

What are the relative future prospects of room units and central air conditioners?

"The outlook for both is good," believes Russell Gray, Carrier vice president. "There will be a very substantial market for room units for a long time. While the room unit is always a compromise for the specific space, it is the economical approach for cooling one or two rooms, but a central system costs less to cool an entire house."

"There are millions of enclosures that can't be air conditioned by a central system except at a cost that will hurt," Wampler added.

Questioned about public acceptance and sales problems in residential air conditioning, Wampler commented that the public "seems completely aware of the desirability of air conditioning in commercial buildings" but is not completely sold on residential air conditioning in all parts of the country. The entire industry, in his opinion, has made a mistake in the past of assuming that everyone wanted air conditioning for their homes and that manufacturers merely had to sell their own products rather than the idea of residential air conditioning itself.

"I don't think we've done as good a job as we should in selling air conditioning for health," Wampler also declared.

The "pride of ownership" problem was likewise mentioned by Wampler, who explained that while lots of people will see a family's new car, color television set, or new kitchen, they should be completely unaware of a smoothly operating air conditioning system.

"Yet, after a person gets air conditioning, pride of ownership shows up rather quickly," he said.

Asked about the heat pump, Wampler declared that "in many areas the heat pump is not yet economically sound."

He also pointed to sales figures on the heat pump: 1,000 in 1953, 10,000 in 1957, and "probably" 20,000 in 1958.

San Mateo College To Give Night Course In Home Air Conditioning

SAN MATEO, Calif. — A course in residential air conditioning with Roland R. Taylor as instructor will be given evenings once a week during the spring semester at San Mateo Junior college, Coordinator Bernard Gjerdrum has announced.

This is a beginning class for those already in the trade as contractors, estimators, and journeymen, according to the sponsoring committee for the San Mateo County Sheet Metal & Heating Contractors Association, of which Gordon Provance of Menlo Park is chairman.

Other members of the committee are Joseph Boudreau of Belmont, Ted Alves of Redwood City, and Dan Marelich of San Bruno.

Taylor said classes will be held from 7 to 9 o'clock every Wednesday evening for 15 weeks.

Taylor is application engineer for Fraser & Johnston Co., San Francisco furnace and air conditioning equipment manufacturer. He is a director of the Warm Air Heating Institute of Northern California and a trustee of National Warm Air Heating & Air Conditioning Association.

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"ELECTRICAL CHARACTERISTICS OF PACKAGED AIR CONDITIONING UNITS."

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For your copy, clip this ad and mail with name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

U.L. & A.S.M.E. WATER-COOLED CONDENSERS ⅛ TON TO 15 TONS and LIQUID RECEIVERS for EVERY REQUIREMENT

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Chicago 39, Illinois

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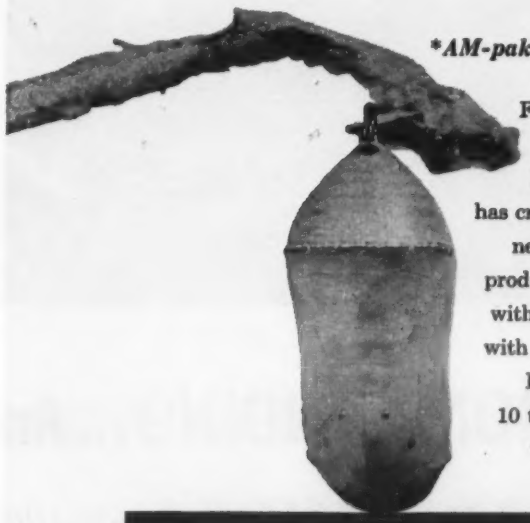

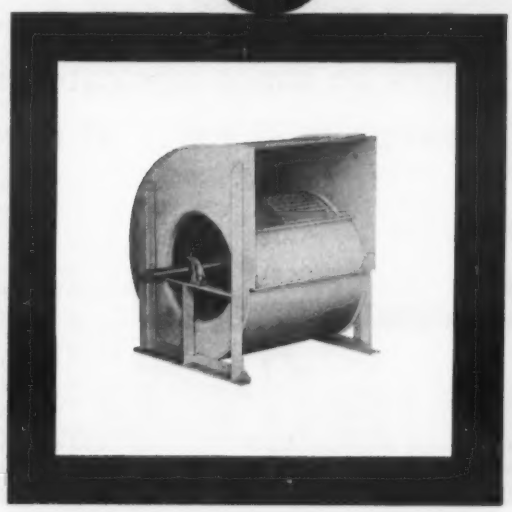

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For evaporative condensers, air handling units and heavier heating equipment, Utility has created AM-pak, an entirely new design priced for high production, combining efficiency with flexibility, strength with perfect dynamic balance.

Ranging in diameters from 10 to 36 inches, the rugged blower wheel has 64 specially curved blades, features a conical center disc construction and operates at static pressures up to 6¼" W.G.

You deliver greater air-power with less horse-power when your equipment is built with AM-pak.

Scroll shapes and wheel diameters can be matched to your exact needs. Let us send you complete data.

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*Air Moving Package.

Cost of Good Year-Round Residential System Can Be Kept Low, Dallas Builder Proves

NEW YORK CITY — "Good year-round air conditioning need not cost what you think it costs," contends David Fox, Dallas home builder who in three weeks last Fall sold out an entire 500-unit project of $15,000 homes equipped with air conditioning.

Speaking at a recent "seminar on air conditioned living" held here by Carrier Corp., Fox explained how careful attention to house design and orientation as well as the system and equipment can permit considerable reduction in first and operating cost, both of which are extremely important to the buyer of an air conditioned home.

Practical To Cool Homes Costing $13,000 To $15,000 Today

"It is not only desirable but practical today to air condition new homes in the $13,000 to $15,000 price bracket as well as more expensive models," Fox told press representatives at the seminar.

"In the early days, air conditioning was considerably more expensive than it needs to be now. In 1951, all of eight years ago, I built a home for my mother and we decided to air condition. It was a house providing about 2,200 sq. ft. of space and costing about $30,000," Fox said.

"We didn't know then what we do now about either designing the house or the air conditioning installation for real economy. We used a 4-ton unit and the cost was slightly over $3,000, which was about 10% of the total price of the house. The average monthly operating bill for cooling and heating was $25. Also, the unit required a room-sized space of about 35 sq. ft.

How Cooling Picture Has Changed In 5 Years

"Five years ago in Dallas, air conditioning became an important factor in the sale of new homes costing more than $30,000. Today perhaps two out of three are equipped at the time of construction. We've reached the point, I believe, where it has become difficult to sell even in the $20,000 and up price class without provision for complete control of indoor climate," Fox declared.

"The construction company of which I am a partner has been building and selling homes for 12 years and many of them have been air conditioned. But a turning point in our operations occurred in 1956. We had always built good, well-engineered houses. Now for the first time we made a detailed study of the people to whom we hoped to sell. We planned to erect a group of homes in the $20,000 to $30,000 price bracket.

"Among the many facts we discovered was one common and very striking characteristic. It related to what they wanted in their dream homes.

"It won't surprise you a bit that they wanted exactly what people had in $40,000 and $50,000 houses. This included fireplaces, paneled dens, kitchen equipment, four bedrooms in many plans, double garages, and, of course, air conditioning. And they wanted it for less money," he said.

"Incidentally, this always happens in building. The features of today's $35,000 home will be incorporated in some way in tomorrow's $25,000 model. People see them in homes they can't afford and want it in homes they can.

Why Builder Decided To Cool All Homes

"One of the first definite decisions we made was that all of our new houses would be air conditioned year around and that the system would be included in the purchase price with no options. Our reasons were these:

"First, people want air conditioning. We knew they did because they told us they did in a survey of our potential prospects. Remember air conditioning was already a must in the more expensive homes they were using as models," said Fox.

"Second, a good air conditioning system has a special meaning for the entire house. It helps tell the potential buyer that this is a fine home and that everything has been taken care of.

"Third, it eliminates one of those important negatives in the buyer's mind that tend to stiffen sales resistance—the suspicion that the home may be difficult to resell because of the lack of some vital feature.

"The point I am making with the second and third reasons is this:

Cooling Becoming 'Necessity' for Builder

"Regardless of what the average person may think, air conditioning to the builder is no longer a luxury. It is fast becoming a merchandising necessity," Fox emphasized.

"Once the decision to air condition was made, we had to remember this in everything we did. We felt we should do more than simply offer a house that was air conditioned. It should be designed and built around the air conditioning. This would not only reduce the financial outlay but also result in better climate control.

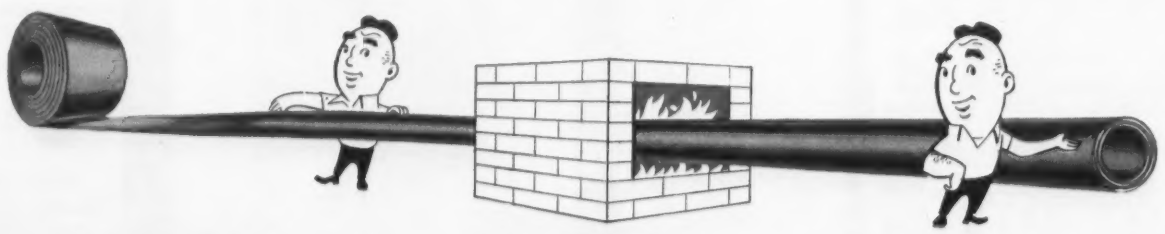
"We studied carefully such things as orientation, roof design, window placement, insulation, exterior color, selection of equipment and design of the air conditioning system to determine their effect on both the first cost and the operating cost for heating and cooling. The result was our Flair for Living house. Since its introduction we have sold out three developments totaling some 600 houses, at prices ranging from $21,000 to $30,000.

"These homes were from 2,000 to 2,500 sq. ft. in area and because of the time we had spent on design we were able to use 3-ton cooling units. A general rule of thumb among builders is that the heating system will account for about 3% of the total price. It might be startling to some that we were able to provide in these homes fine air conditioning, including both cooling and heating, for ap-

WHY BUNDY LEADS IN MASS-FABRICATION

PRECISION BENDING... Another reason why

And Bundyweld *double-walled* steel tubing can be mass-fabricated into practically any leakproof shape... at minimum cost per unit



Bundyweld starts as a single strip of copper-coated steel. Then it's continuously rolled twice around laterally...

into a tube of uniform thickness, and passed through a furnace where copper coating fuses with basic steel.

Result: Bundyweld Tubing—double-walled, beadless, metallurgically bonded through 360° of wall contact.

proximately 5%, or in our $30,000 homes for $1,500. The operating costs averaged about $10 per month including both heating and cooling. The equipment takes about 10 sq. ft. of space.

"Remember the home for my moth, built just eight short years ago. For the same size house, the installed system cost $3,000 or about 10% of the total price. Operating expenses were $25 a month, and the equipment took 35 sq. ft. of space.

"The knowledge we had developed became even more important to us in our next project. I think you will find this the most interesting part of the discussion. Because we have been able to put a price tag on everything we did to show you its effect on the cost of year-round air conditioning," Fox continued.

"Before we completed the last Flair project, we had decided to expand into the lower-cost field in order to increase volume. Now we were talking about a bracket beginning at $13,000 and extending up to $18,000. We are calling it Accent.

"Once again we studied the market. The characteristics of potential buyers in this price bracket were different. They were younger and their incomes were lower, and generally because of their lesser years of age they had fewer children. One thing, however, remained exactly the same. I mentioned earlier that their older brothers wanted fireplaces, paneled dens, built-in kitchen equipment, double garages, and most especially air conditioning. Well, so did they.

"Most of them had seen our Flair homes. They wanted something very much like those—except, of course, for $15,000.

"It presented us with a real challenge. And to meet it we again set our goals at year-round air conditioning completely installed for 5% of the total price of the home with the lowest possible operating cost," Fox explained.

How Builder Kept Cooling Costs Down

"Perhaps you wonder why a builder should place such stress on operating expense. There are two reasons. The lower the heating and cooling requirements the smaller the system needs to be, permitting lower first costs. Also, the less money a buyer needs to spend on operating his house, the more he can afford to put into mortgage payments and, therefore, the larger house he can afford to buy. Let me show you how we accomplished these goals.

"The first element in design for air conditioning is proper orientation. The planning here starts with the street lay-out and lot arrangement. In this plat you will see that most of the streets run east and west. The long sides of the homes then will face north and south, avoiding the intense heat of the rising and setting sun.

Planning Glass Areas

"The glass areas should be horizontal rather than vertical because it is easier to shade with overhangs, and the glass should be held to a minimum on east and west walls where overhangs have little effect. The overhang in this case is 2 ft. In midsummer it will throw a shadow about 4 ft. long down the south wall, completely shielding our horizontal glass. Vertical windows would not have been protected. In the winter the sun is lower in the sky. It can shine in the windows and help cut the heating bill," he pointed out.

"Exterior colors must be chosen for their ability to reflect the sun's heat. This is particularly true of the roof. A dark roof will absorb heat while a light one turns the sun's glare away.

"These are the basics of exterior design for air conditioning—orientation, window design, shading devices, and color. Together they brought us a saving in yearly operating cost of $22. By reducing the air conditioning requirements they also helped reduce the first cost of the system—by a rather substantial amount as you will see later.

Structural, Interior Design Factors

"Next comes structural and interior design. The FHA requirement for ceiling insulation is 2 in. We used a full 4 in. here and 2 in. in the walls," Fox said.

"We've cut the operating cost for heating and cooling by another $12. And the proportional saving in first cost will more than outweigh the extra insulation expense.

"The distribution system is extremely important. A duct will leak heating and cooling right through its metal surface. We brought the main supply duct down from the attic where the intense midsummer heat would steal cooling capacity. It has become part of the hallway ceiling with 4 good in. of insulation to shield it from the heat above. We designed the central hallway to give us the shortest possible length of duct from central unit to outlets. We also coated the ducts with insulation for quietness and to prevent loss of heating and cooling," he explained.

"This distribution system design reduced operating cost by a big $35 a year. There is also a substantial reduction in installation expense through planning the shortest possible ducts.

Choosing Equipment

"The number of kilowatts of electricity needed to generate a given output of cooling is a significant factor in operating cost. We checked equipment ratings carefully to find one that would give us the most capacity for the least electricity.

"We wanted a close-coupled system with the refrigerating unit tied into the air supply duct. This would eliminate the loss of cooling through a long network of refrigerant pipes and also the cost of the piping. The furnace is located just inside an interior wall and the cooling unit just outside. A metal sleeve through the wall connects them, admitting cool, dehumidified air into the distribution system.

"The superior performance of the equipment in terms of smaller input for a given output and the closely-linked units brought us another saving of $22 in operating cost," Fox revealed.

"Now our efforts to reduce cooling and heating requirements began to produce some extra bonuses. With a smaller unit we saved on wiring both outside and inside the home. And the standby fee charged by the utility company was less.

"Let's take a look at what

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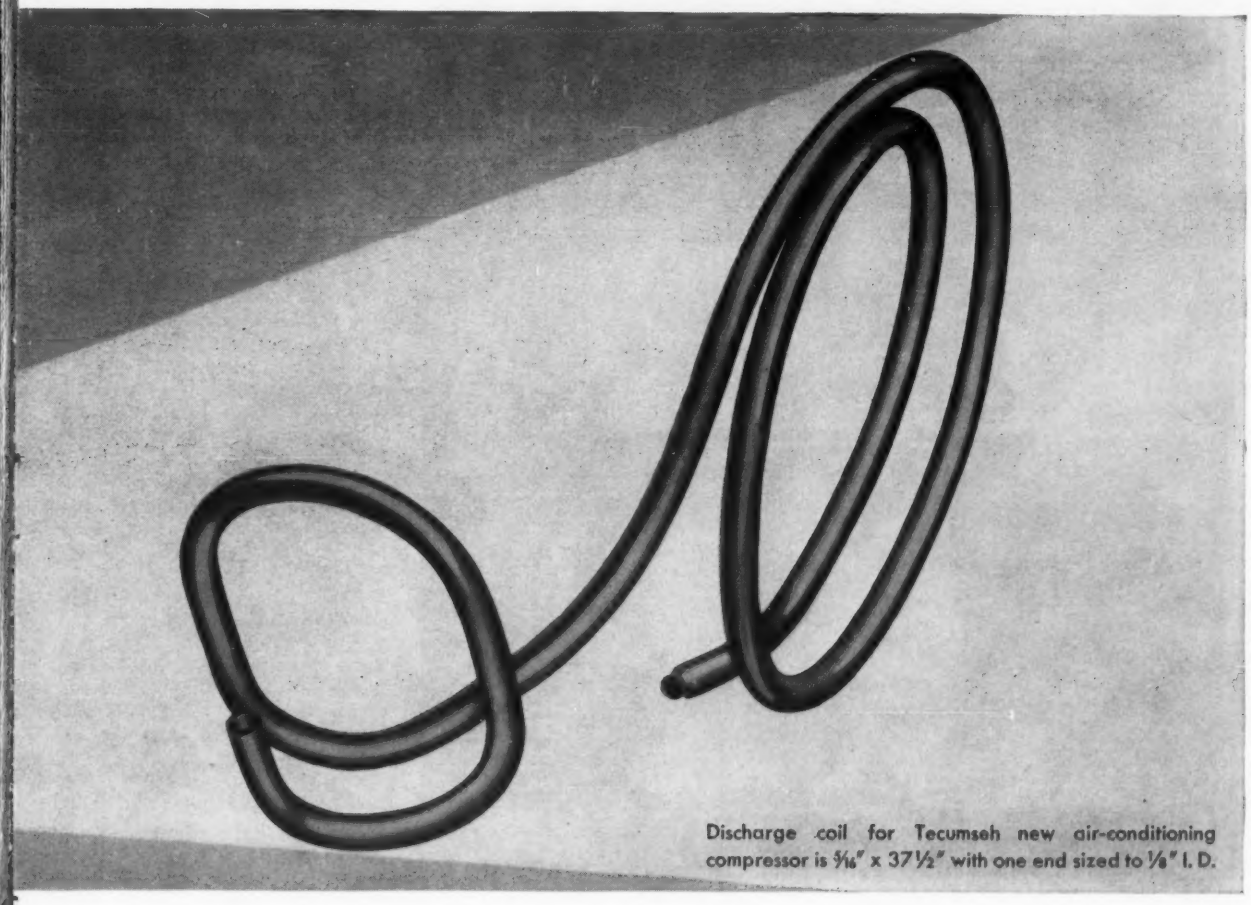

Discharge coil for Tecumseh new air-conditioning compressor is 5/16" x 37½" with one end sized to ⅛" I. D.

Bundyweld parts always meet specifications

Bending steel tubing into complex shapes is a Bundy® specialty. That's why Tecumseh came to us for a discharge tube in a new air-conditioning compressor. Bundy specialists fabricated the coil (shown above) to such tight tolerances that it was able to clear both inner casing and outer shell. Here's why you should bring your tubing problems to Bundy, too:

The safety standard of the refrigeration industry. Double-walled from a single strip for extra strength, every inch of Bundyweld® is tested to assure you of years of leakproof performance.

Expert fabrication. Skilled technicians use Bundy developed fixtures and machines to mass-fabricate parts by the millions . . . each to closest tolerances.

Free design service. Our engineers will assist you at any stage in the development of your product. They'll help you design tubing parts for lowest unit cost . . . without compromising engineering standards.

It will pay you to check *first* with Bundy, the largest producer of steel tubing for the refrigeration industry. Write, wire, or call us today!

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WORLD'S LARGEST PRODUCER OF SMALL-DIAMETER TUBING • AFFILIATED PLANTS IN AUSTRALIA, BRAZIL, ENGLAND, FRANCE, GERMANY, AND ITALY

There's no real substitute for

BUNDYWELD® TUBING

Bundyweld and Bundy specialty tubings are sold through distributors in principal cities

Air Conditioning Low-Cost Homes--

(Concluded from preceding page)

we've done. From the standpoint of operating cost, exterior design and orientation has saved us $22 annually; insulation $12; air distribution design $35; selection and design of equipment $22; and smaller electrical service $12. Altogether we have saved more than $100 a year in the cost of cooling and heating. In addition, the initial expense has been cut by more than $350.

"Let me show you why we consider the operating expense so important. The mortgages we offer call for payments of $6.10 per month or $73.20 a year for each $1,000. The $100 saved on operating cost will pay for an additional $1,400 worth of mortgage. Add to this $350 in first cost and you have given your buyer the ability to purchase $1,750 more house. This could give him an extra bedroom and bath, or perhaps wall-to-wall carpeting throughout plus a built-in kitchen," Fox suggested.

"I should advise you that our methods of cutting system cost are particularly appropriate to our climatic area. They will be different from those where other weather conditions prevail. But there will be ways of providing more efficient cooling and heating no matter where you are.

"My purpose in being here is to tell you that good year-round air conditioning need not cost what you think it costs. One of the people in this audience told me one of those Texas stories going the rounds at the recent home builder's convention. It seems that in Texas people no longer boast about how many Cadillacs, airplanes, or oil wells they own but about how many tons of air conditioning they have.

"As you have seen, we don't follow that philosophy. We were able instead to achieve our objective, which was that first cost for complete air conditioning should represent not much more than 5% of the total price of the house," Fox said.

"In our $15,000 homes, the figure is about $750. Of this the heating, duct system, and controls account for about $300, and the cooling equipment and installation about $450. Operating cost is $108 annually including both heating and cooling.

"The proof of the pudding is always in the eating. Constructing and selling homes is a fascinating profession. A builder must in a sense anticipate the dreams people have about the setting in which they want to spend their lives. Then he must go through the kind of details I have mentioned, multiplied a hundred times by other parts of the house, in order to give concrete reality to their dreams at a price they can afford. How close he comes and how ably he communicates that reality determines how well his houses sell.

"We opened our project officially last fall. Within three weeks we were sold out—500 homes representing a total buyers' investment of $8,000,000. No home sells on one feature alone. But as you can see air conditioning has proved itself an essential in our operations and not an expensive one. I suspect many more builders in many parts of the country will be finding out the same thing before too long, as many have already," Fox predicted.

Low-Cost Water Repellent Insulation Fill Reduces Heating, Cooling Costs

CHICAGO — A new low-cost water-repellent insulation fill which is claimed to solve the problem of moisture in masonry walls will make possible substantial savings in the cost of new homes and other types of construction and in heating and cooling costs, it was predicted recently.

Developed in the laboratories of the Zonolite Co. of Chicago, the new material will enable architects and builders to use comparatively inexpensive masonry walls without additional insulation or costly finish materials, the company said.

"Elimination of the moisture problem removes a major objection to block and cavity walls," according to Daniel J. Boone, Zonolite vice president.

As an indication of the insulating efficiency of the new material, Boone pointed out that a block or cavity wall insulated with the new masonry fill will have a heat transmission rating well below the .27 "U" coefficient customarily required by FHA in most sections of the country.

With Zonolite's new water-repellent masonry fill insulation, a block or cavity wall can be insulated at a cost of 10 cents a square foot, according to Boone.

Tests of identical homes, one with insulated walls and one without insulation, showed that the new material can reduce heat loss by as much as 60%, he reported.

"Not only would this represent substantial savings on the cost of heating or cooling a home, school, or other building, it also makes possible the use of smaller and less costly air conditioning equipment," Boone said.

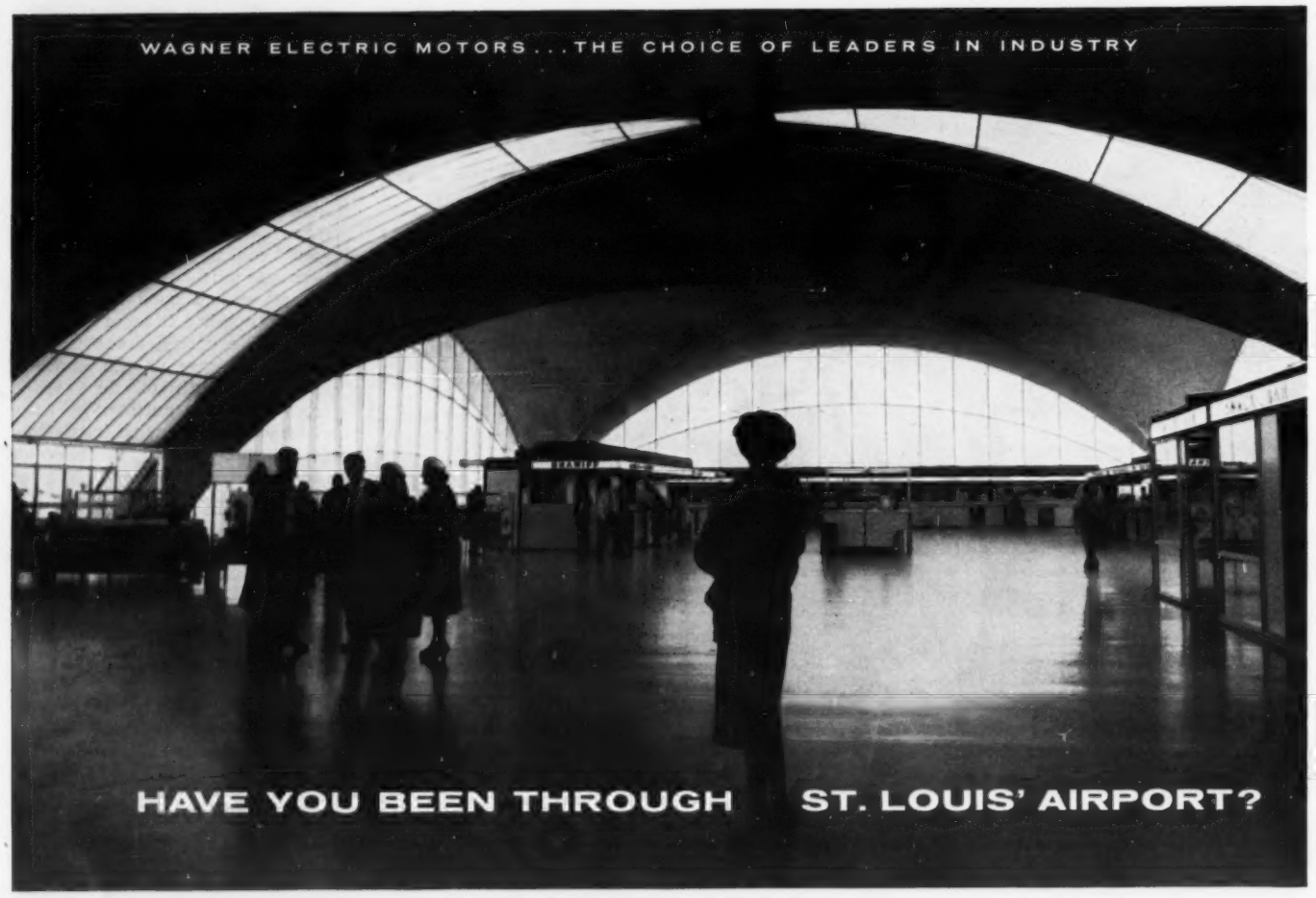
"In the test houses it was found that the insulated walls permitted use of cooling equipment with 3.3 tons' capacity as compared to 4.2 tons' capacity equipment required for the uninsulated house."

Hub Auto Supply, Wilco Agree To Modify Claims

WASHINGTON, D. C. — The Federal Trade Commission announced that Wilco Co. and Hub Auto Supply, Inc., Boston, and William B. Sandler, an official of both, agreed, in connection with the sale of an apparatus designated "Wilco-Therm," to discontinue representations that this or any similar device is an air conditioner, or that it purifies, deodorizes, filters, and cools air.

They also agreed, the FTC said, to stop misrepresenting both the original price of the device and the regular retail price of their products.

The stipulation agreement does not constitute admission by the parties that they have violated the law, it was pointed out.



Here are two of the five air return fans, each powered with 15 hp Wagner Motors.

Chances are, you have . . . some 133,000 air travelers pass through this handsome Municipal Airport each month. And, chances are, you've been impressed with the clean, soaring architectural lines of the building and with the clean, fresh, always comfortable atmosphere.

The job of efficient air movement for this 50,000 square foot building is handled by five air supply fans and five air return fans—all driven by Wagner electric motors . . . five 40 hp motors for air supply and five 15 hp motors for the air return fans. Their quiet, efficient operation in this application is typical of the service record of Wagner motors in millions of applications all over the nation.

Whatever your motor requirements may be, Wagner can supply a standard motor or build a special motor to fit your need. Constant research and development have kept Wagner up front in electric motor design for more than 65 years—made the name Wagner one you can trust in choosing motors for your plant or for your product. Call your nearby Wagner field engineer for an engineering analysis of your next motor application. There are Wagner branches in 32 principal cities.

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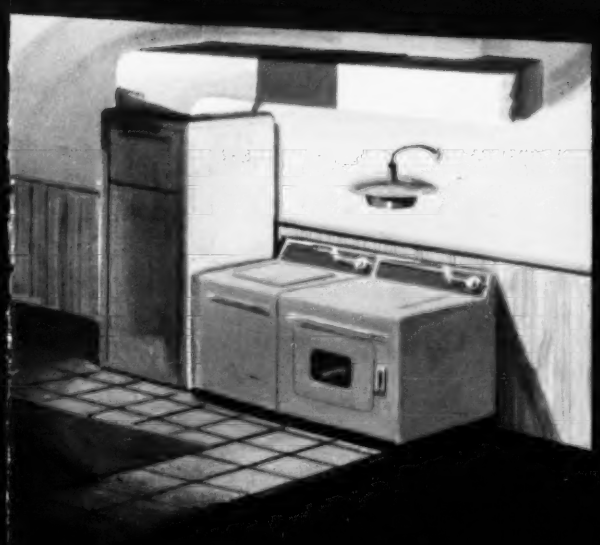


adapts most any warm air furnace
for powerful, efficient summer cooling
. . . features exclusive PRIDE O' YARD
air-cooled compressor-condenser unit

add to your profits... add to your prestige... with

JANITROL

ADD-ON COOLING

quality engineered and built to help you sell and grow!

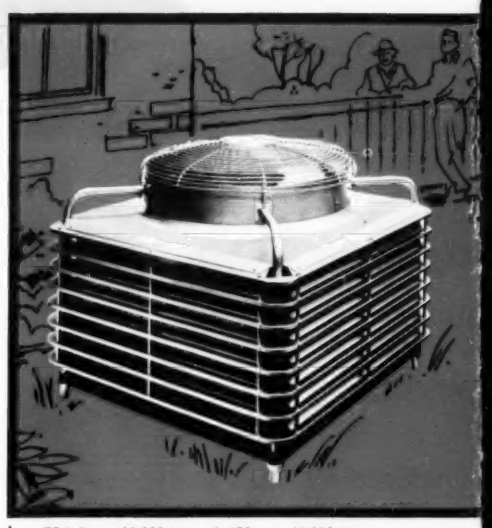
If you're looking for big, new profit opportunities without installation and service headaches, Janitrol ADD-ON waterless cooling is made to order for you.

With the complete Janitrol ADD-ON Cooling line, you can adapt most any forced air furnace for *really efficient* central cooling . . . cash in on the booming market for summer comfort.

ADD-ON COOLING components are system-engineered for easy installation with quiet, powerful performance that makes one job sell another. Evaporator coil fits in supply outlet duct in either upflow or downflow systems. The beautiful Janitrol PRIDE O' YARD Compressor-condenser unit—styled by a leading designer—is specially engineered for cooling with outside temperatures to 125° F. And waterless operation eliminates plumbing, sewage and water supply problems—lets you install cooling for *less*, and appeal to more prospects.

Janitrol evaporator coil and PRIDE O' YARD units are available in sizes to handle the heat gain on most any residential cooling job. Get the good word on Janitrol waterless ADD-ON Cooling from your Janitrol representative, or mail the coupon to us right away. Sell and grow with Janitrol!

Exclusive JANITROL Evaporator Coil design allows installation in either horizontal or vertical position. Features fast drain-off of condensate to minimize re-evaporation into circulating air during compressor "off" cycle. No floor space needed, no noise or vibration because there are no moving parts inside the house!



Exclusive JANITROL PRIDE O' YARD Compressor-condenser Unit

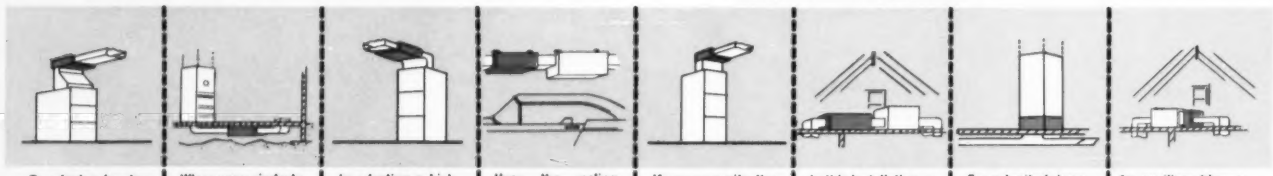
adds distinctive beauty to any yard—completely outmodes all other units of its type. Exclusive louvered design allows air circulation from all sides while shading condenser from sun at all times . . . boosts cooling efficiency and results in lower current drain. Air exhausts out top, instead of sides . . . no damage to nearby growing things from exhaust air. Rugged, weatherproof construction with every necessary safeguard for children and pets. Compressor-motor is hermetically sealed for years of trouble-free performance—*warranted in writing for five years!*

Install Janitrol Add-on cooling in homes with or without a basement . . . provide full central cooling with big savings by using existing ducts!

CAPACITIES

SRA-7	22,000 btu	A-403	45,000 btu
SRA-9	35,000 btu	SRA-11	58,500 btu
A-401	45,000 btu	A-603*	76,000 btu

*Not illustrated—for larger residential and light commercial applications.



To adapt a low-boy furnace for summer cooling, the cooling coil section is installed in supply air duct.

When warm air ducts are placed in crawl space, the cooling coil supplies efficient cooling.

In adapting a high-boy furnace (upflow) for summer cooling, the cooling coil section can be mounted in the supply air duct as shown.

Here, the cooling coil adapts a horizontal furnace in the garage for summer cooling.

If space permits, the cooling coil can be used with a high-boy furnace, as shown here.

In this installation, a horizontal furnace and the cooling coil in the attic are the key to summer cooling.

For a Janitrol downflow furnace, used with perimeter heating, simply raise the furnace and install the cooling coil beneath it.

An auxiliary blower is available for installation where existing blower capacity is inadequate. Here is a cooling coil plus auxiliary blower in attic.

JANITROL HEATING AND AIR CONDITIONING DIVISION
Surface Combustion Corporation, Columbus 16, Ohio
In Canada: Moffats Ltd., Toronto 15

Please show me how I can sell and grow with new Janitrol ADD-ON COOLING and other quality-built Janitrol products for home comfort.

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COMPANY _____

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CITY _____ ZONE _____ STATE _____

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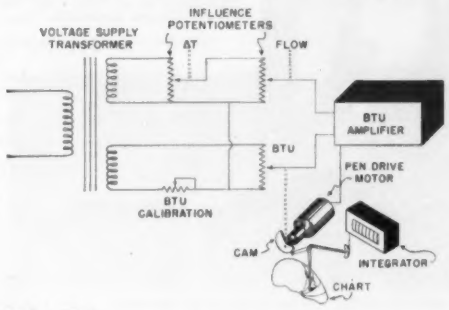
Sell and Grow with JANITROL

Ask your Janitrol representative for all the facts, or RUSH the coupon to us today!

From JANITROL—a complete line of gas and oil furnaces, unit heaters, conversion burners, air-cooled summer cooling conditioners, combination heating-cooling conditioners.

BTU Meter Uses Single Recorder To Record, Indicate, and Integrate



SCHEMATIC diagram showing functional placement of B.t.u. meter recently introduced by The Hays Corp.

MICHIGAN CITY, Ind.—Primarily designed for use in measuring heat transfer in hot water generators, cooling towers, refrigerating systems, and other such applications, a new B.t.u. meter is now available from The Hays Corp. here.

A single recorder is used to continuously record, indicate, and integrate B.t.u. loss or gain in a flowing liquid.

Also on the same chart, temperature differential and flow rate of the liquid are recorded.

"Primary use for the new B.t.u. meter is the measurement of heat transfer in hot water generators, cooling towers, refrigerating systems, and other such heat exchangers in power and process industries," it was explained.

"Two platinum resistance temperature elements, differential connected and measuring inlet and outlet temperature of the liquid, form two legs of a resistance bridge in which the differential temperature receiver in the recorder acts as a rebalancing unit. Liquid flow through the process, measured by a Hays model 245 flow transmitter, is also recorded.

"Differential temperature and flow retransmitting slidewires on their respective receiver units are connected so as to multiply their respective signals. This product represents number of B.t.u. gained or lost per unit of time by the liquid as it passes through the process. B.t.u. signal is directed to the B.t.u. receiver unit, where it is rebalanced and recorded.

Complete information can be obtained on the model 913 B.t.u. meter from any authorized Hays representative, or by writing directly to Dan Meyer, The Hays Corp., Michigan City, Ind.

Herrlich Retires After 30 Yrs. with Kelvinator

DETROIT—Charles H. Herrlich, manager of Kelvinator's commercial contract department since 1944, has announced his retirement because of ill health after more than 30 years with the company.

As manager of the commercial contract department, Herrlich negotiated and completed contract sales for Kelvinator compressors to manufacturers of refrigeration equipment.

Herrlich joined Kelvinator as sales manager of the Baltimore-Washington branch in 1929.

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Only 25¢ each.

Air Conditioner Drive Set for TVA Area

KNOXVILLE, Tenn.—A campaign to promote sales of air conditioning units will be conducted May 15-July 15 under sponsorship of the Tennessee Valley Public Power Association.

The Tennessee Valley Authority reported recently that the drive has the backing of 60 of the 150 municipal and cooperative distributors of TVA power.

Participating distributors will award prizes to persons registering with air conditioning dealers. Top prize is $1,000 or a trip for two to Nassau.

Auer Book Includes Engineering Data

CLEVELAND — A new book containing detailed engineering data on registers and grilles for heating, air conditioning, and combination heating-cooling has been published by The Auer Register Co. here.

Entitled "The Auer Engineering File," the 60-page brochure will serve heating, ventilating, and air conditioning contractors in selecting registers and grilles for all types of installations, the company said. It covers both domestic and commercial units.

All information was compiled by Auer engineers after extensive testing according to standard procedures of the American Society of Heating & Air-Conditioning Engineers, it was stated.

Sears Store Gets Cooling

AUGUSTA, Ga.—Completely air conditioned throughout at a cost of more than $350,000, the new Sears, Roebuck & Co. store has formally opened here.

Thomas H. Brittingham, head of the air conditioning, heating, and plumbing firm bearing his name, had the contract for what he described as one of the largest ever made by his company in this city.

How to cut costs with the RIGHT motor

Don't be baffled by power factors, torques, efficiencies, and starting, accelerating and thermal characteristics, or housing, horsepower and speed control. Let Century Electric help you balance these factors. You can show your customers they'll have lower operating and maintenance costs with the *right* motor.

Here's how Century Electric can help you, too:

10,000 Choices—Century Electric engineers can help you specify the right motor without having to rely on a few types to do all jobs. Century Electric makes a complete variety of integral horsepower motors. Over 10,000 types up to 400 hp. There is one for every type of equipment. For all operating conditions, too—dusty, corrosive, explosive or moist.

Application Know-How—Every Century Electric sales engineer knows motor drive systems because he sells motors and nothing but motors. Often he can give you on-the-spot answers. If not, he can turn to an engineering staff that comes up with quick answers.

You can get the right motor for your equipment just by contacting your nearest Century Electric Sales Office or Authorized Distributor. A Century Electric sales engineer will be glad to help you.

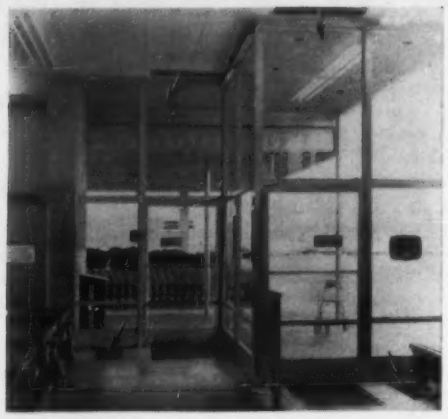
CENTURY ELECTRIC COMPANY

St. Louis 3, Missouri *Offices and Stock Points in Principal Cities*

Century

58-21

Warm Air Blankets Supermarket Doors



FLOW OF WARM AIR from grilles (arrows) in floor just inside doors of this supermarket insulates checkout girls from drafts and helps keep building temperature even. This Dunham-Bush system is installed in First National Food Stores at Wellington Circle, South Lawrence, Mass.

May Condition Roanoke Armory

ROANOKE, Va.—City Council recently authorized City Manager Arthur S. Owens to secure bids for air conditioning of the National Guard Armory here.

Stating that the work should be done because of the poor ventilation system in the armory, Vice Mayor Roy L. Webber said the improvement will be for the benefit of the public, which makes considerable use of the property. It will be the first National Guard Armory in Virginia to be air conditioned, according to Owens.

Roanoke has some $21,000 residue from the construction cost of the armory. The state recently relieved the city of this commitment and agreed to air condition the building.

Look, Ma! No Frames!

NEW, SIMPLIFIED version of raised floor introduced last summer by Floating Floors, Inc. eliminates steel frames. All that is needed now are aluminum floor plates and pedestals. New version features lower cost, reduced noise and vibration, and greater sub-floor area despite lower over-all height.

York Lands 532 Unit Navy Order

YORK, Pa.—The Navy has signed what is said to be one of the largest orders it has ever placed for self-contained packaged water-cooled air conditioning units—532 units in three sizes.

Placed with York Div. of Borg-Warner Corp., the contract calls for 333 3-hp. units, 126 5-hp., and 73 7½-hp., all for delivery in early April.

The contract specifies that the units be suitable for salt water operation and must be capable of withstanding certain roll, tilt, and vibration conditions.

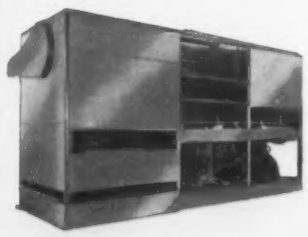
M. S. Lebair and J. C. Rose, who worked out the order for York, said that many of the units will be used to air condition ward rooms, crew's mess, and similar areas aboard ships.

In a sea-going contract signed through Borg-Warner International, York equipment will also be used to air condition and refrigerate six new vessels being built for the United Fruit Lines.

AEROJET AMERICAN MACHINE & FOUNDRY ATLANTIC & PACIFIC TEA COMPANY ATOMIC ENERGY COMMISSION BANK OF AMERICA BURROUGHS ADD MACHINE CADILLAC MOTORS CENTRAL CASUALTY INSURANCE COMPANY CHICAGO BRIDGE & IRON CITY OF HOPE HOSPITAL CONTINENTAL BAKING COMPANY CONVAIR EDISON COMPANY FAIRCHILD CAMERA CORPORATION FEDERAL TELEPHONE & RADIO FOOD FAIR STORES FRANKLIN STORES FEDERAL HOUSING ADMINISTRATION F. W. WOOLWORTH COMPANY GENERAL ELECTRIC HUMBLE OIL COMPANY J. C. PENNEY CO ER ENGINEERING KAISER PERMANENTE HOSPITAL A MINING & MANUF YORK TELEPHC STORES PHILLIP MERICA REPUBL EBUCK SYLVANIA ELECT U. S. NAVY U. S. ARMY U. S. AIRFORCE W COMPANY W. T. GRANT STORES U. S. NAVY LOCKHEED AIRCRAFT LUCKY LAGER BREWING MINNESOTA MINING & MANUFACTURING NATIONAL CASH REGISTER NATIONAL FOOD STORES NEW YORK TELEPHONE COMPANY OLIN MATHEISON PACIFIC GAS & ELECTRIC PENN FRUIT STORES PHILLIPS PETROLEUM RAND McNALLY & COMPANY RADIO CORPORATION OF AMERICA REPUBLIC AVIATION ROBERT HALL CLOTHIERS SAFEWAY STORES SEARS & ROEBUCK SYLVANIA ELECTRIC UNIVERSITY OF SOUTHERN CALIFORNIA WESTERN ELECTRIC COMPANY

GOVERNAIR

GOVERNAIR PRODUCTS ARE NOW IN USE BY THESE DISTINGUISHED ORGANIZATIONS



Model SCMZ

Self-contained Multi-Zone air conditioner — one of 18 basic Self Contained equipment models, available from 3 to 120 tons.

Model GMZ

Governair also "Satisfabricates" a complete line of Vertical, Horizontal and Multi-Zone Air Handling Units.

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. . . that's the copyrighted term that describes Governair air conditioning . . . equipment which is so basically flexible in design, that it can be manufactured to fit almost *any* space and load requirement.

This beneficial feature, pioneered and developed by Governair, is coupled with imaginative, tested engineering and quality workmanship. The end result is an installation that's a much *wiser* dollar investment.

Write for detailed information, or consult your yellow page directory for the name of our local representative.

THE GOVERNAIR CORPORATION
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Joint Committees Preparing Report on MCA-NAPC Merger

WASHINGTON, D. C. — The third joint meeting of the committees of the Mechanical Contractors Association of America and the National Association of Plumbing Contractors studying a proposed merger met recently at the Palmer House in Chicago, it was announced here.

At the meeting, the joint committees reviewed and amplified the four subjects discussed at the previous meeting, namely: membership qualifications, dues structure, method of voting, and election of officers and directors both on interim and permanent basis.

Considerable discussion was held by committee members on studying the basic structure of the proposed merged association in light of the existing structures of NAPC and MCAA.

A complete report is being prepared and, after its approval by the joint committees, it will be released to the respective associations for study and review.

Open Air Conditioned Railroad Station, Start Another One In Florida

ST. PETERSBURG, Fla. — Seaboard Air Line Railroad has opened a new $440,000, air conditioned passenger station at Thirty-fourth St. and Fairfield Ave. S. here.

Another air conditioned station will be built at Thirty-eighth Ave. N. and Thirty-fourth St. for the Atlantic Coast Line. It will be a combination passenger and freight station.

Room Air Conditioner Sales Up In Several Areas In '58 Despite General Drop In Market

DETROIT—Although sales of room air conditioners in 1958 were off from the previous year in many areas, there were several exceptions to this trend, utility and association reports indicate.

For example, distributor shipments of air conditioners to dealers in the territory of Union Electric Co., St. Louis, rose 16.3% last year from 1957.

The totals there were 19,103 in 1958 compared with 16,427. December shipments amounted to 1,077, against 270 the preceding month and 66 in December, 1957.

Humidifier Sales Also Show Rise

As in some other areas, dehumidifier sales last year in the Union Electric territory also showed a sizeable gain over 1957. A total of 4,245 dehumidifiers were shipped by distributors in 1958, compared with 1,171 a year earlier.

In the metropolitan Washington, D. C. area, distributor sales of room air conditioners (including 1 hp.) rose from 22,829 in 1957 to 23,575 in 1958. A report by the Electric Institute of Washington indicated that the 1958 showing was helped considerably by the December volume, which totaled 1,352, compared with 110 in the like year-ago month.

Dehumidifier sales in the Washington area soared to 6,211 last year from 3,541 the previous year.

New Orleans Picture Reported Rosy

Another rosy report came from New Orleans Public Service, Inc. In its area, the utility reported, dealers sold 28,965 room air conditioners in 1958, up 10.9% from the 1957 total of 26,123. Public Service estimates that this year New Orleans dealers will sell $6,300,000 worth of room air conditioners.

In Chattanooga, C. B. Osborne, sales manager for the Electric Power Board, reported that room air conditioners outsold other electrical appliances there last year.

A total of 44 dealers sold $14,352,558 worth of appliances in 1958. Of this amount, $1,727,000 was spent by customers for 6,900 air conditioners. No comparative figures were given.

Osborne pointed out that air conditioner saturation in Chattanooga is between 45 and 48%. This means, he explained, that some 34,000 homes are equipped with cooling systems.

The following month-by-month breakdown of air conditioner sales in the Chattanooga area was reported:

	Residential	Commercial
January	42	12
February	49	10
March	89	11
April	205	23
May	1,034	23
June	1,903	34
July	2,033	27
August	1,202	35
September	162	23
October	19	13
November	10	25
December	5	8
Totals	**6,753**	**244**

In Spokane, Washington Water Power Co., in a dealer sales summary for 1958, indicated that 898 room air conditioners were sold and 203 central air conditioners. Comparative figures for 1957 were 454 room air conditioners and 325 central units.

In the Philadelphia area including Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, distributors sold 42,901 air conditioners last year, down from the 45,834 units sold a year earlier, it was reported.

A sales report issued by the Electrical Association of Philadelphia gave this month-by-month breakdown for the two years:

	1958	1957
January	3,565	2,812
February	5,506	4,637
March	5,348	6,079
April	7,872	4,833
May	7,647	7,004
June	5,658	17,178
July	5,911	2,843
August	-593	23
September	742	-351
October	718	111
November	157	89
December	370	476
Total	**42,901**	**45,834**

In January of this year, the association reported, room air conditioner sales by distributors rose to 4,214 from 3,565 the previous January.

A report published by Kentucky Utilities Co. and Old Dominion Power Co. on territory electric equipment sales by dealers showed that room air conditioner volume in 1958 dropped to 3,783 from 4,152 in 1957, and sales of home cooling plants fell to 189 from 225. However, dealers sold 546 dehumidifiers in 1958, compared with 292 the year before.

In the territory of Kansas Power & Light Co., Topeka, sales of room air conditioners by 212 dealers were off 21%, totaling 6,466 in 1958, compared with 8,164 in 1957.

And in the Cleveland area, room air conditioner sales last year declined to 5,937 from 9,221 in 1957, a drop of 36%, according to a report released by the local Electrical League and compiled from figures provided by distributors.

West Penn Power Co. reported that 1958 dealer sales of room coolers in its southwestern Pennsylvania territory amounted to 1,945 against 2,462 in the previous 12 months. However, dehumidifier sales moved up from 510 units in 1957 to 682 units sold last year.

In January of this year room cooler sales in the area totaled 27 compared with 26 a year ago; and dehumidifier sales rose to 17 from 8 in January, 1958.

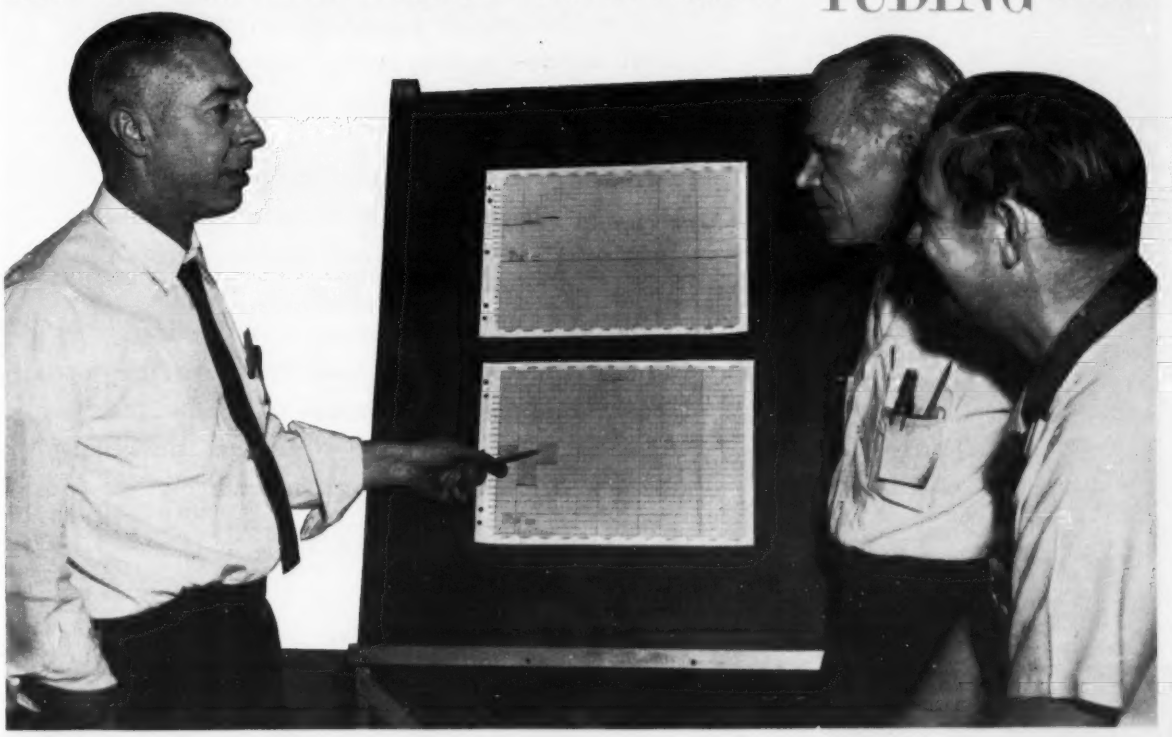
Florida Power & Light Co., just issuing its report on November sales, said air conditioners registered a gain over November a year ago of 120% while dehumidifier volume was up even more—150%.

Sales for November were reported at 4,181 compared with only 1,903 a year earlier. This pushed sales for the first 11 months of last year to 58,544 against 45,501 in the like period of 1957.

The FP&L report shows unit sales to retail dealers in its areas as reported by state wholesalers. Also included are sales by department and chain stores and some retailers who purchase their merchandise from sources other than state wholesalers.

THE PEOPLE WHO KNOW REFRIGERATION BEST

DEPEND ON THE PEOPLE WHO KNOW TUBING BEST!



THEY HOLD THE MOST PROMISING JOBS IN TUBING!

When they make a promise they keep it! These men are in charge of meeting the production schedules for GM Steel Tubing serpentines. They are George Gundell, General Foreman, and John Bida and Frank Radde, Foremen of Serpentine Forming. These men see to it that your order of GM Steel Tubing serpentines, regardless of size or complexity of fabrication, reaches you when you want it.

They work to strict schedules so that all of the extra-quality controls can be given your tubing. They know these extra precautions make GM Steel Tubing the cleanest you can buy . . . quality-controlled many times beyond your specifications. Put some on test today. You'll see why GM Steel Tubing is ahead in Refrigeration sales . . . by miles.

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GM STEEL TUBING BY ROCHESTER PRODUCTS

AMERICA'S LARGEST MANUFACTURER OF REFRIGERATION TUBING

Airtemp Names Sunset Supply In N.Y. Area

DAYTON—Appointment of a new wholesale distribution firm for Chrysler Airtemp room air conditioners in the New York metropolitan area has been announced by J. B. Ogden, vice president-sales.

New firm is Sunset Electric Supply Co., 9218 150th St., New York City.

According to Ogden, the franchising of Sunset Electric completes Chrysler Airtemp's plans for independent wholesale distribution of the company's air conditioning and heating products in the New York area.

As previously announced, Apparatus Distributors, Inc. was named exclusive distributor for Airtemp commercial and residential packaged air conditioning and heating equipment in New York.

At the same time, Ogden announced the closing of the Chrysler New York factory branch.

The franchising of Sunset Electric brings together two veterans of the electric appliance wholesaling field, it was noted.

Edward Goldberg is president of the 50-year-old firm, having served in that capacity for the past 15 years. His father, Hyman Goldberg, founded the company and now serves as chairman of the board.

Joining Goldberg with the Chrysler franchise is Thomas J. Hodgens, formerly vice president of Vornado Distributing Co., Inc., New York City. He becomes Sunset's vice president in charge of sales.

Sunset Electric plans considerable expansion of its facilities in the near future.

Philco Announces Higher BTU Ratings

PHILADELPHIA — Philco Corp. has announced new higher guaranteed B.t.u. ratings for its 1959 line of room air conditioners.

Ratings announced earlier were based upon engineering samples, the company said. The new ratings are based upon actual production models.

The new ratings conform to both NEMA and ARI standards and will be stamped on the serial plate of all models, according to Philco. The new B.t.u. ratings are:

Model	Cooling Capacity in B.t.u.h.	Hp.	V.	Suggested List Price
A1094-11	11,500	1	230	$299.95
A1292-2	10,500	1	115	339.95
A1294-11	13,000	1	230	339.95
A1592-11	14,500	1½	230	369.95
A2092-11	16,000	2	230	399.95
A2094-11	15,000	2	230	399.95

Portable Air Conditioner Fits Casement, Double Hung Window, Delivers 6,600 BTU

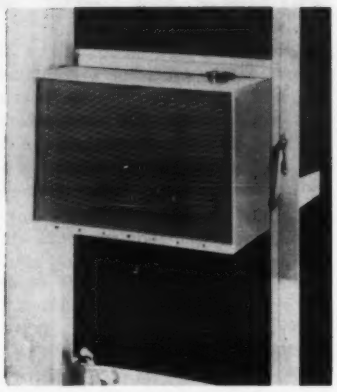
MASPETH, N. Y. — A new portable air conditioner, the "Mighty-Mite," said to deliver 6,600 B.t.u. in the smallest chassis in the company's history, highlights the 1959 Welbilt Corp. air conditioning line.

This model "is expected to lead the way to the company's most successful year," it was stated.

Purchasers of the Mighty-Mite may take it home and install it themselves in a few minutes, according to the company.

It weighs 78 lbs.; measures 14½ in. wide, 10½ in. high, and 20½ in. deep.

The 1-hp., 7.5-amp., 115-volt, 6,600 B.t.u. unit is priced at $179.95. A 4,200 B.t.u., ½-hp. unit has a suggested list price of $149.95.



"MIGHTY-MITE" portable air conditioner mounted in casement window. This 1-hp. unit is said to weigh 78 lbs.

It fits into either double hung or casement windows and has two complete installation kits. It is claimed to be extra quiet.

Howard Landis, sales manager of Welbilt's air conditioner division, reported that in spite of a cool northern summer, the 1958 season was its most successful, with shipments well ahead of 1957. With a normal summer in the northern area of the country he predicts a 40% increase in sales for 1959.

He also stated that the company expects its combination heating and cooling "Wall Slim" units will probably account for 15 to 20% of the over-all sales in 1959.

"All of these units are available with a condenser defrosting feature which makes peak operation possible in below 40° temperature," the firm said.

The heating and cooling units, Welbilt reported, have four capacities: 8,800 B.t.u. on 115 volts, 11,000 B.t.u. on 230 volts, 13,000 B.t.u. on 230 volts, and 15,000 B.t.u. on 208 and 230 volts. They range in price from $279.95 to $309.95.

The Wall Slim air conditioning unit for cooling only is 27 in. wide, 19⅝ in. high, and 17½ in. deep. There are three 115-volt models in this line with prices ranging from $209.95 to $299.95. There are also eight Wall Slim models in the 230 and 208-volt calibre within the same price range.

"Power Master" models in 6,000 and 7,000 B.t.u. retail at $189.95 and $199.95. The 208-volt and 230-volt Power Master models retail at $199.95 each. Power Master units are 22¾ in. wide, 15⅛ in. high, and 16½ in. deep.

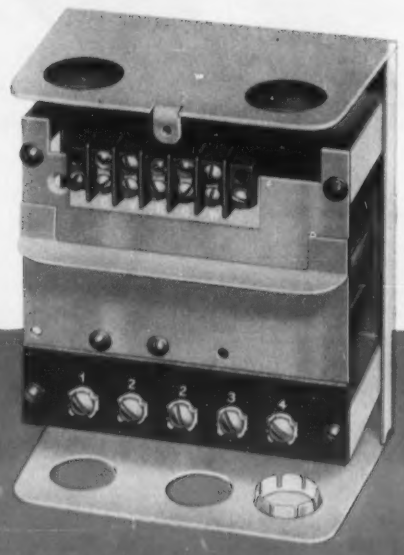
All Welbilt air conditioners feature a fully removable chassis "for easier installation and faster service." The company added that it has developed a motor and fan in conjunction with an air chamber "to create exceptionally quiet operation." The units have a two-speed fan.

FAN CENTER

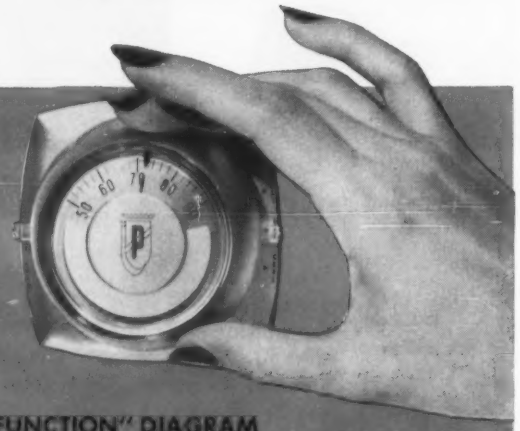
to control air handling equipment

For residential air conditioning systems with remote cooling equipment . . . always use the Penn Fan Center to control the Fan Coil Unit. It saves you installation time and assures most efficient operation. Compact, it combines a transformer with fan relay, reset relay and heating relay . . . *one or all*. On remote condensing units or water chillers, *specify* the Penn Cooling Center. Both of these "centers" have the latest engineering advances to assure the finest air conditioning performance possible! Remember, when it comes to controls . . .

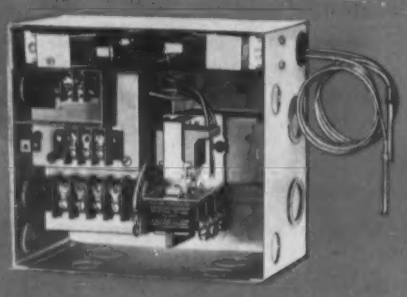
It's best to buy Penn!



FAN CENTER . . . 6" high, 4½" wide

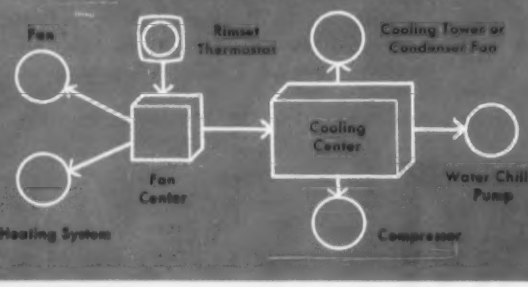


RIMSET Thermostat



COOLING CENTER . . . 7" high, 8" wide

"FUNCTION" DIAGRAM



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Operating Costs of Residential Air Conditioning and What This Means to Dealers and Installers. By R. A. Gonzalez—25¢ each.

Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

U. of California Offers Evening Course In Berkeley

BERKELEY, Calif. — Extension courses in refrigeration, and heating, ventilating and air conditioning, are announced for the spring semested by University of California.

"Refrigeration system design and applications" will be taught in San Francisco Monday evenings by Don Bryant from the San Francisco city college faculty.

"Application of automatic controls to heating and air conditioning systems," will be taught in San Francisco Tuesday evenings by George F. Martus, service and installation manager for Minneapolis-Honeywell Regulator Co., San Francisco.

"Heating, Ventilating & Air Conditioning" will be taught in San Francisco Wednesday evenings by Leo E. Dwyer, mechanical engineer of the Clyde Bentley consulting engineering staff; and in San Leandro Wednesday evenings by Ihsan H. Ali, mechanical engineer with G. L. Gendler & Associates.

B.H. Boatner Named To Succeed J. F. Myers As Wesco President

PITTSBURGH—B. H. Boatner, a veteran of 30 years' service with the company, has been named president of Westinghouse Electric Supply Co. (Wesco).

He succeeds John F. Myers who is retiring after 37 years with Westinghouse.

The announcement was made by Chris J. Witting, vice president of Westinghouse Electric Corp. and general manager of its consumer products group.

Since May, 1957, Boatner has served as vice president and general manager of Wesco.

Robertshaw-Fulton Net Income Rises

RICHMOND, Va. — Net income of Robertshaw-Fulton Controls Co. amounted to $4,008,819 for the year ended Dec. 31, 1958, as compared with $3,920,081 for 1957, T. T. Arden, president, announced.

This was equal, after preferred dividend requirements, to $2.40 per share on the 1,654,423 common shares outstanding compared with $2.36 per share on the 1,637,090 shares outstanding a year ago.

Net sales for the year amounted to $68,771,939 compared with $71,282,374 in 1957.

Penn Controls Holds Week-Long Meeting

GOSHEN, Ind. — Penn Controls, Inc. held a week-long sales conference Feb. 9-13, according to H. M. Carnahan, director of sales.

Sales personnel from all over the United States and Canada as well as Penn's export organization took part. Sessions were devoted to sales techniques and objectives, markets, and products.

Tower Water Sample Tests Acidic First Week

Anti-Corrosion Program for New Building Stems Tide of Corrosive Effect of City Water

NEW YORK CITY — The fight against the corrosive effects of a city's water supply on air conditioning systems and piping is demonstrated in the anti-corrosion program developed for the new 34-story gold colored aluminum skyscraper at 575 Lexington Ave., according to a report by Water Service Laboratories, Inc. here.

After only one week of operation, a water sample taken from the cooling tower showed that the water was already acidic, the report said, adding:

"The analysis, which showed a pH of 5.9 and revealed the presence of 57 parts per million of iron in the water, clearly indicated that the corrosive attack on the piping of the circulating water system was already well under way."

Normally, the pH of New York City water, which refers to the measure of strength of acidity or alkalinity in water, is about seven; values above seven indicate alkalinity; values below seven, acidity.

According to Dr. Sidney Sussman, chief chemist of Water Service Laboratories, if the water in the cooling tower of the gold skyscraper had continued to go untreated, the oxygen, carbon dioxide, sulphur dioxide, and other corrosive impurities which would have been absorbed by the cooling tower water as it was sprayed through the atmosphere, would have dropped the pH to 2.5 or 3 in a matter of weeks.

Such a condition would inevitably lead to leaks, a possible breakdown, and a costly repair bill within a year or two, he noted. A pH of 2.5 or 3, the chemist pointed out, is equivalent to a solution of strong acid such as muriatic acid.

Water Service Laboratories installed its equipment immediately and treatment began.

"Continuing analyses of the water, made at weekly intervals, showed a marked reduction in the acidity of the water," the WSL report stated. "The last test made just before the system was laid up for the winter showed a pH of 8. The 57 parts per million of iron present in the water before treatment began was reduced to less than one part per million.

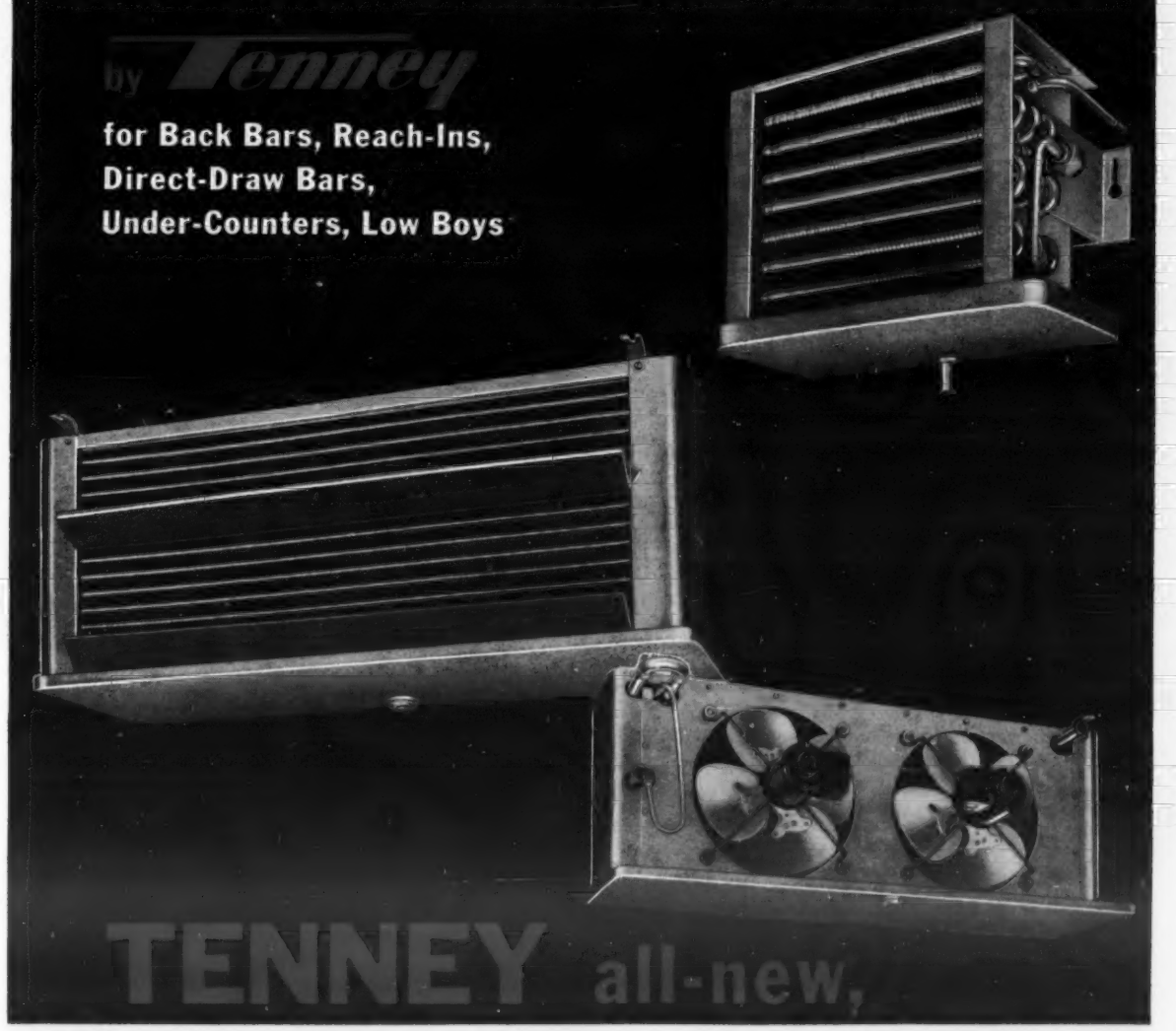
"The air conditioning equipment includes a condenser cooling water system with a cooling tower, and a closed chilled water system also treated by Water Service Laboratories.

"The cooling tower has a capacity of 2,000 tons of refrigeration. The three cell tower on the roof handles 6,000 g.p.m. which it sprays through the atmosphere, rejecting the heat of compression of the refrigerant. Two 3,000 g.p.m. pumps circulate the water between the cooling tower and the refrigerant condensers in the basement."

LOW-COST, EASY TO INSTALL, EASY TO SERVICE LINE

by Tenney

for Back Bars, Reach-Ins,
Direct-Draw Bars,
Under-Counters, Low Boys



TENNEY all-new,

all-aluminum mx unit coolers

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- COIL CONSTRUCTION completely non-ferrous
- MINIMUM PRESSURE DROP CIRCUITING, conservative ratings
- AMPLE ROOM FOR TX VALVE
- EASY TO INSTALL, keyhole slotted hangers on unit
- FACTORY ASSEMBLED unit hangers, drain fittings
- 2-WAY MOUNTING standard factory equipment on MX-9 through 17
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- LIFE LUBRICATED standard motors; easily replaced in field

Write for Bulletin 118-58

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Chain Stores—$100 Million Market

Contractor's Net Profit Can Be Higher on This Type Of Business Than on Local Work, Study Indicates

By Edmund C. Seergy, Manager, National Accounts Sales, Typhoon Air Conditioning Co.

Chain stores as a group are buying $100,000,000 worth of air conditioning every year and they are buying equipment every week, 52 weeks a year, particularly during the off-season. Money can be made dealing with chain stores.

There has been no recession in the chain store business. This past year in the supermarket, variety, and drugstore field, 4,000 new stores have been built and 4,400 have been remodeled.

For an idea of the expansion plans of some of these chains, we have received reports that in 1959 the following chains have these plans for expansion:

A & P Tea Co., 250 stores; Safeway, 200 stores; Grand Union, 40 stores; Jewel Tea, 35 stores; W. T. Grant, 52 stores; F. W. Woolworth, 80 stores; G. C. Murphy, 33 stores.

This is typical of what is happening among all chains. We have heard a lot about recession—such things as the steel industry being off 50%, automobiles off 40%, machine tools for heavy equipment for industry also substantially off. Despite these statistics, a very large segment of industry and trade are quite well off or have been very little affected.

For instance, in the first quarter of this year, purchases of non-durable goods which include food and clothing, did an annual rate of business equal to 41½ billion dollars, actually the fourth quarter of 1957 by 700 million. In fact, the sales in this field ran 6 to 7% ahead of last year.

The American public is not buying as many automobiles but is buying plenty of food and in the first four months of last year, total retail sales were only 4% behind last year. This includes automobiles; thus if we eliminate automobile sales, all other retail sales would actually be ahead of last year.

Supermarkets Lead The Way

In 1957, the chain stores air conditioned 12,100 stores and spent $98,200,000 for these installations. These results were obtained in a survey covering 724 chains operating 20,455 stores.

Supermarkets lead the way with over 3,000 stores air conditioned in 1957, with an expenditure of 40½ million dollars. Typhoon got a substantial share of this supermarket business. Present indications are that supermarkets will spend more money in 1959. The information we have at hand is that there are 9,350 new stores planned and 11,550 stores slated for major remodeling.

Table 1

Type of Business	Regular Local	National Buyer	Both Combined
Sales	$90,000	$10,000	$100,000
Cost of Sales	65,300	8,000	73,300
Gross Margin	$24,700 or 27.4%	$ 2,000 or 20%	$ 26,700 or 26.7%

Direct Mail Selling

Here is what Typhoon is doing. We have started a direct mail advertising campaign this past year directed solely to chain store operators. To date we have mailed out over 1,200 letters and have received inquiries from over 45 firms; which we turned over to our distributors. Several of these firms have been led to immediate sales. The main thing is that every one of these firms have been introduced to Typhoon equipment.

Personal Contact Vital

At the present time we are also stepping up our contact with these chains, and by that we mean personal contact, in an effort to interest more of them in the complete line of our equipment and securing their approvals so that we may quote on their future air conditioning projects.

Then, again we want our people in the field to let us know what chains we can help them with and in what manner we can help them soundly enter this market.

National Buyer Business Biggest Profit Producer

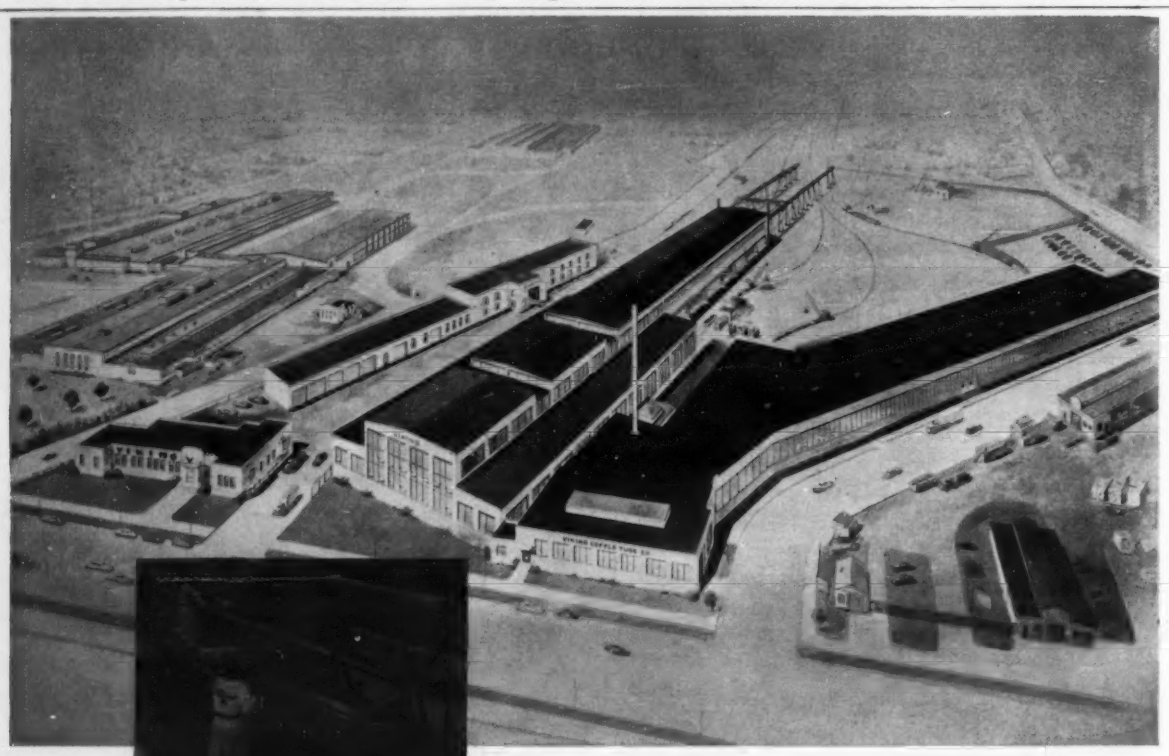
Some readers might be saying about now that the chain store business is all right, but that you can't make a profit from it. This is patently not true.

Recently, a comprehensive survey was made which checked over the financial statements of some 30 dealers doing chain store work. The dealer may tell you that he must accept some 25% less than the normal gross margin to do national account business, but he ought to be happy to do so, because the figures show that every national account sale adds a solid 18.8% to his profit.

This survey was made from all kinds of distributors both large and small from every section of the country. Their sales were analyzed, as were their costs to sell, and their expenses, to get an actual composite picture.

When the survey was completed there were facts about the distributors' gross profit margin that were really startling. The first discovery was that while some distributors grossed more than others, the average distributor spent $73,300 for every $100,000 of business obtained. Hence, the gross margin for his business as a whole was $26,700, or 26.7%.

To evaluate the importance of national account business, other factors had to be taken into consideration: (1) The gross margin on national buyer contracts is only about 20%; (2) This business represents only 10% of the volume of the average dealer. With these afore-



PORTRAIT OF A PREFERRED SOURCE

FOR THIN-WALL COPPER TUBING

In this modern, automated plant . . . specifically designed for fabricating thin-wall copper tube . . . Viking men and machines are at work producing the finest tube for America's foremost manufacturers of refrigeration and air conditioning units and coils.

Utilizing the latest production engineering and quality control techniques, combined with the highest grade materials, Viking copper tube is unsurpassed for accurate tolerances, exact tempers and perfect uniformity.

In designing this specialized fabricating facility, Viking has pioneered many of the industry's newest automatic production and testing methods . . . and is constantly improving and perfecting every step in the manufacture of Viking copper tube in a continuing effort to create copper tube that will do the job better, faster and at the lowest cost.

VIKING

COPPER TUBE CO.

CLEVELAND 10, OHIO

PRECISION DRAWN SEAMLESS COPPER TUBE

Table 2

Type of Business	Regular Local	National Buyer	Both Combined
Total income	$90,000	$10,000	$100,000
Expenses:			
Advertising and promotion	380	....	380
Salesmen's compensation	11,830	....	11,830
Other selling expenses	864	96	960
Administration	8,406	934	9,340
Misc. expenses	855	95	950
Total expenses	22,335	1,125	23,460
Cost of sales	65,300	8,000	73,300
Total outgo	87,635	9,125	96,760
Net profit	$ 2,365 or 2.63%	$ 875 or 8.75%	$ 3,240 or 3.24%

mentioned statistics we can break down the gross margin picture of the average dealer to each 100,000 sales, into three categories: (See Table 1.)

This was only the first step toward the goal, however. The next was to determine the cost of doing each of the two kinds of business—regular local and national buyer. And looking over the financial figures supplied by the case histories, it was soon evident that the average distributor incurs expenses in five categories: advertising and promotion, salesmen's compensation, other selling expenses, administration, and miscellaneous expense.

National Accounts Boost Distributor's Net Profit

Table 2 shows what these expenses amounted to in dollars-and-cents per $100,000 worth of business and comparing the difference between the cost of doing local business with national buyer business, it isn't surprising that national buyer business is far and away the biggest profit producer of the two.

The figure for advertising may seem low, but the figures were taken from the record. Next, national account cost . . . $1,125 for expenses. You can do a lot of engineering and administration for $1,125, based on $10,000 worth of business. This would leave the dealer plenty of money left for such things as supervision and other expenses that may crop up.

Incidentally, if a distributor does more than 10% of his sales in national accounts, say 25%—his total net profit increases to . . . $4,990 on sales of $100,000, a jump from 3.24% to 4.99%.

Since most dealers turn over their capital at least five times a year, 4.99% profit can be mighty attractive in terms of yield on investment. It figures out to be just 25%, compared to 13.15% return made by the distributor on other business.

What national accounts want is a manufacturer with a complete line of good equipment giving the national account buyer the best available products and installations at the lowest possible price—and then make sure his installations are performed efficiently and on time. If this is done, repeat sales will definitely follow. That's what makes this business all the more lucrative.

Retail Chain Stores Spent $103,000,000 To Air Condition 12,200 Stores In 1958

'Chain Store Age' Sees $20,000,000 Spent by Landlords for Tenants

NEW YORK CITY — Retail chain stores air conditioned 12,200 stores in 1958 and spent $103,000,000 for the installations, according to a survey made by *Chain Store Age* magazine, which has been making such surveys since 1949.

"The survey generates enough internal evidence," the publication stated, "to permit a conservative guess that an additional expenditure of about 20%, or about $20 million, was made by landlords in behalf of chain-store tenants."

Air conditioning was installed in more than 58% of the 20,900 chain stores which were built or substantially remodeled in 1958, the survey indicated.

The 1958 air conditioning expenditures were close to 5% higher than the 1957 expenditures, and were at an all-time high.

Chain-Store Field	Expenditures (in millions) 1958	1957	No. of Stores Air Conditioned 1958	1957
Grocery	$ 43,500,000	$40,500,000	3,200	3,000
Variety	13,700,000	13,000,000	1,300	1,200
Restaurant	12,800,000	13,200,000	1,600	1,700
Drug	7,500,000	7,000,000	1,000	1,000
Dept. Store-Gen. mdse.	7,200,000	5,500,000	600	500
Apparel	3,700,000	4,800,000	1,000	1,200
Auto supply hardware	3,600,000	4,000,000	800	900
All other	11,000,000	10,200,000	2,700	2,600
Totals	$103,000,000	$98,200,000	12,200	12,100

REPRINTS SELLING FOR PROFIT.
By Frank Klein—Only $1.00 ea. Clip this ad and mail with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

NEW Carrier "CANT-CLOG"* SPRAY NOZZLE

Revolutionary new self-cleaning spray nozzle reduces maintenance and maintains high system capacity. Ideal for original equipment or replacement on cooling towers, air washers, spray-coil units, etc. Low in cost. Installed in seconds. Available as replacement caps, or complete nozzles. For ratings and information, write Carrier Corporation, Syracuse, New York. *Patent Pending

CLINCH SALES

. . . with BRYANT'S Many EXCLUSIVE FEATURES!*

BRYANT Heating Systems . . . Air Conditioners . . . Water Heaters . . . are not just ordinary products. They have special exclusive features developed by Bryant engineers for greater safety, efficiency, economy. You can easily point out their advantages and *prove* why Bryant is "Years Ahead in Year 'Round Comfort." Here are just a few:

BRYANT Command-Aire Controls—make it easy to match air delivery exactly to duct work—and to change air delivery from heating to cooling.

BRYANT Rubber-Mounted Blower—*quiet* operation; moves ⅓ more air than conventional blowers.

BRYANT Diaphragm Gas Valve—opened by gas pressure, closed by gravity; hermetically-sealed in oil, can't wear out.

BRYANT Safety Sentinel Pilot—stays lighted when other pilots fail, extremely low in gas consumption.

BRYANT TRI-Alloy Heat Exchanger—metals and ceramic base fused to steel, originally developed for jet planes; gives faster heat transfer, longer furnace life, more comfort and economy.

BRYANT Air Conditioning—a brand new series of remote condensers—simplified design, increased capacities, lower operating costs . . . a quality unit priced right.

GET THE PROFIT FACTS! Write or phone your Bryant distributor, or contact Bryant Manufacturing Co., Indianapolis, Ind. In Canada: Bryant Manufacturing Ltd., Toronto, Ontario.

bryant

12 SOUND REASONS WHY YOU SHOULD BECOME A BRYANT DEALER!

1 **MULTIPLE LINES:** Furnaces, Air Conditioners, Boilers, Water Heaters, Unit Heaters—widest selection of models and prices to fit any market.

*2 **EXCLUSIVE FEATURES YOU CAN SELL**—backed by 51 years of engineering leadership.

3 **FAST DELIVERY**—from complete local stocks.

4 **COMPLETE FINANCING AND CREDIT ASSISTANCE**—suited to your needs—administered by local people who know *you*.

5 **ON-THE-SPOT COUNSEL**—sales, design, engineering, service—from your nearby distributor or factory branch.

6 **SALES AND TECHNICAL TRAINING**—by experienced specialists—both locally and at the Bryant plant.

7 **BUSINESS MANAGEMENT GUIDANCE** from factory and distributor, to help you cut costs, get more business, make more money.

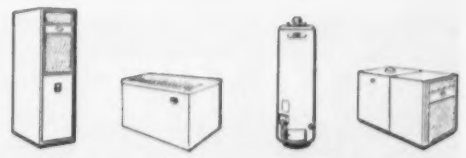
8 **LOCAL AD CAMPAIGNS**—field tested—with Bryant factory and distributor participation.

9 **SOUND SELLING POLICIES**—in effect for over 50 years—protect your business and profits.

10 **BRYANT'S NATIONAL REPUTATION** with architects, engineers, builders, utilities and home owners helps *you* sell.

11 **GAS AIR CONDITIONING** gives you big opportunity to GROW—close tie-in with Gas Utility promotions.

12 **BRYANT'S FINANCIAL STRENGTH** protects your *future*.



389 Gas Furnace · 582 Air Conditioner · 148 Water Heater · 273 Oil-Fired Boiler

. . . YEARS AHEAD IN YEAR 'ROUND COMFORT!

5 Heat Pumps Provide Zoned Year-Round Air Conditioning for Addition to Church

DETROIT—Five heat pumps provide zoned year-round air conditioning for a new addition to the Epiphany Lutheran Church here.

In the installation of the five WT 53-E13 General Electric "Weathertron" units, the compressors and outdoor sections are on the roof of the building. Three of the indoor sections are above the first floor ceiling. Two of the indoor sections are in a basement closet. Installation was made by the General Air Handling Co.

The church addition is of one-story construction with basement finished for occupancy. On the first floor is a church parlor, library, Sunday school office, and kitchenette. The basement houses a league room, Sunday school rooms, and scout rooms.

In an "architects's description" of the building, Merritt & Cole, who drew the plans for the building, comment on the installation in the following manner:

"It was decided to use five heat pumps to provide proper zone control of temperature and humidity throughout the building.

"The heat pumps are automatically reversible, and so are able to maintain any desired room temperature with the setting of a thermostat.

"Such a heating system completely eliminates the need for a boiler room and a boiler chimney, and is the cleanest possible type of heating, avoiding the dirt and dust which are such a problem with most conventional heating systems.

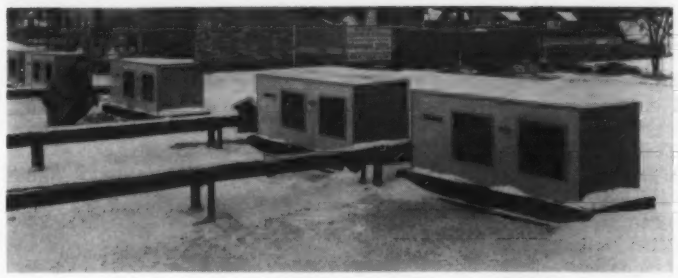
"The various heating and cooling units are mounted in the ceiling construction and above the roof.

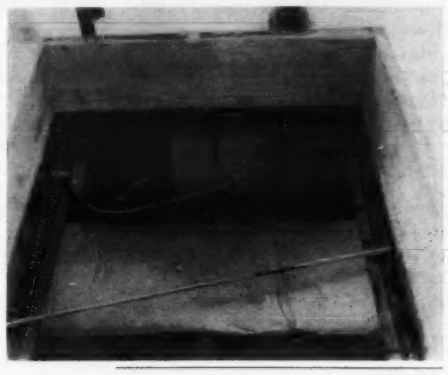
"Design of the heating system takes into account all of the factors affecting efficient and physiologically comfortable air conditioning, such as heat gained from human occupation, building orientation, and from lighting.

"Fresh air is introduced into the windowless basement and stale air exhausted—all mechanically.

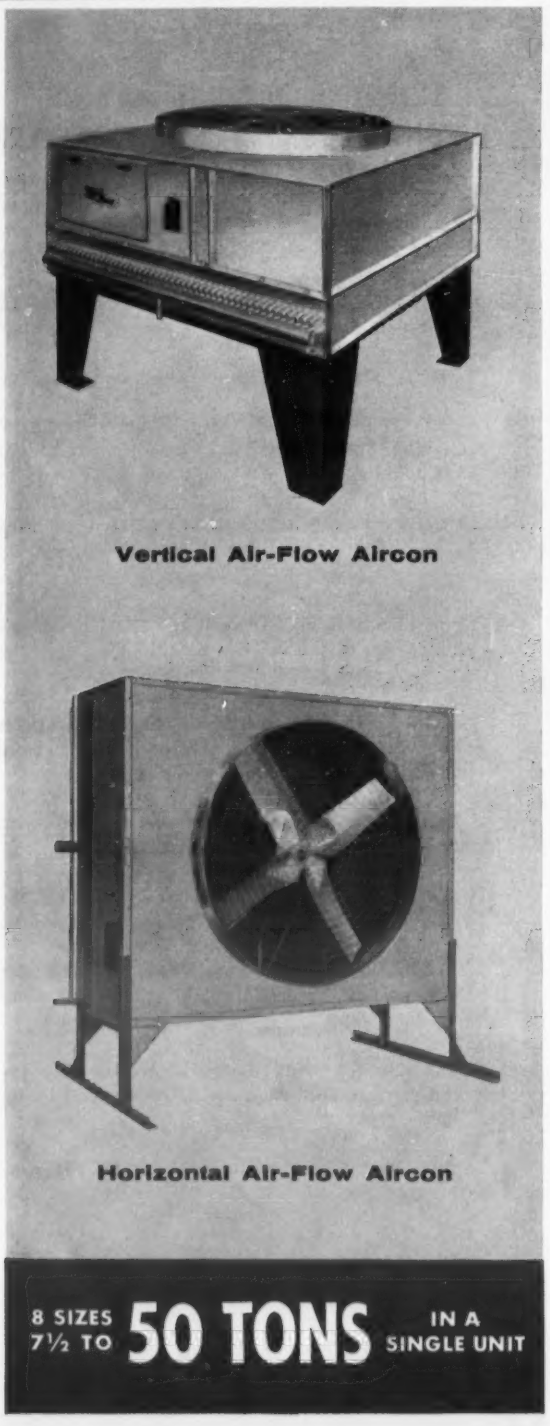
"In order to reduce the operating cost of the heating and cooling systems to a minimum the building is completely insulated, to the point where heat losses are one half to two thirds of those which prevail in the conventionally constructed building.

"The entire first floor ceiling is covered with 6 in. of glass wool insulation, and the windows throughout the building are Thermopane glazing," according to Merritt & Cole.





ABOVE: A. C. Sangster, air conditioning coordinator for Detroit Edison Co., examines compressors and outdoor condensers atop roof of Epiphany Lutheran church in Detroit. Right: Looking into trap door on roof shows one of three indoor sections installed between first floor ceiling and roof.



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your choice of
VERTICAL or
HORIZONTAL
AIR FLOW AIRCON CONDENSERS

Now McQuay offers you your choice of either vertical or horizontal air-flow Aircons in eight models with capacities from 7½ to 50 tons in a single unit. Unlimited tonnage is available with multiple installations. The vertical air-flow Aircon is designed to meet the needs of the architect as well as the consulting engineer. With an extremely low silhouette, the vertical Aircon is rarely visible when installed on a roof. In addition to this, the vertical air-flow Aircon is not affected by prevailing winds and therefore does not require a wind deflector.

You not only get more models and more capacity, but you get more performance, because McQuay Aircons have the exclusive McQuay Ripple-Fin coils—the finest and the standard of the industry.

The McQuay "Seasontrols," automatic head pressure controls, are available as accessories, and modulate the condenser capacity in accordance with the weather for proper operation at all times. For complete information, call the McQuay representative in or near your city, or write McQuay, Inc., 1607 Broadway St. N. E., Minneapolis 13, Minnesota.

McQuay Means Quality

McQuay INC.
AIR CONDITIONING • HEATING • REFRIGERATION

MAKE THE SEASONS COME TO YOU

Torrington Appoints Charles A. Hathaway

TORRINGTON, Conn. — Charles A. Hathaway has been appointed director of engineering of the Air Impeller Div., The Torrington Mfg. Co.

Hathaway

As chief engineer for the last seven years, Hathaway has supervised the expansion of the Engineering Dept. to 42 full-time personnel and extensive air impeller testing facilities, including most recently a sound laboratory, it was noted.

Under Hathaway's direction, the Engineering Dept. will build with the company's sales organization expanded impeller application services to customers, as well as maintain its continued activity in the development of new and improved impeller types, the company said.

So. Carolina's Largest Dept. Store To Get New Air Conditioning

COLUMBIA, S. C.—At a cost of $1,351,000, South Carolina's largest department store, Belk's of Columbia, will double its size.

N. N. Scott, general manager, said the addition will consist of a full basement and four floors for a total of 110,000 sq. ft.

A complete new air conditioning system will be provided, consisting of two 250-ton cooling units on the roof. These will supply individual units on each floor, allowing for floor control to handle the air conditioning load properly for population changes.

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

the important events and people of the Twentieth Century, they may mark down the following date, name, and action as a significant milestone.

February 20, 1959, an obscure Michigan farmer by the name of Stanley Yankus, decided to "quit fighting City Hall" and move to Australia.

Historians in the year 2009 may write:

"This event, relatively unnoticed at the time because of the people's apathy—and preoccupation with pleasure, leisure, and trivia—signalled:

"(1) Beginning of the decline of the U.S.A. as a Great Power;

"(2) Recognition of Australia as the new Land of Opportunity and haven for free men.

"In brief, farmer Yankus was the last truly independent American. He raised chickens and wheat. The wheat he fed to his chickens, which he sold as food at whatever prices they would bring on the open market.

"The U.S. government told him that he raised too much wheat, even if his chickens did eat it all. So he was fined a large sum.

"Farmer Yankus protested. He was just running his own little business, minding his own business, working hard, doing his modest bit to keep the cost of living down . . . was this a crime?

"Scarcely anybody listened. Fewer cared. Only one American lawmaker, Rep. Hoffman, chimed in: 'Our country no longer is the citadel of freedom. The Federal government has moved in on every part of our lives.'

"Articulate farmer Yankus added: 'A large segment of our population is living on handouts. I thought that if I could dramatize my story there would be a rebellion. There wasn't. I'm shocked, so I'm selling my farm and moving to Australia. My young sons can find opportunity there, perhaps, but not here.'

"Mr. Yankus was prophetic. His sons and grandsons did find freedom and opportunity and fulfillment in Australia. Eventually the latter nation took over the mantle of Occidental Civilization after the U.S.A. merged with the U.S.S.R. (at first to repel the Chinese hordes who multiplied faster than atomic weapons could obliterate them).

"It was found, incidentally, that there was no reason why the U.S.A. and U.S.S.R. should not merge. Their politically controlled economic systems had become identical by 1985."

Mr. Yankus, we *hope* that the above fictional quotation from a future History of the Twentieth Century is exaggerated. Sometimes we fear it may not be, the way things are going.

Our parallel with the Decline and Fall of the Roman Empire is too close for comfort.

In the meantime, we can assure you that you have chosen wisely your nation of refuge—Australia.

There the pioneering spirit is appreciated, and needed. There the citizens are the most ruggedly independent people left on this tired old Earth. There you'll find Opportunity . . . and Freedom!

We salute you, sir. You've struck a blow for Liberty.

Out of Our Mailbag

Recold Corp.
Los Angeles Calif.

Editor:

The future of our great industry is threatened! The attached article, which appeared in the *L. A. Herald & Express,* will clearly indicate to you the affect on the air conditioning industry, by the decision of the Los Angeles Board of Supervisors—who refer to air conditioning as "frills."

If we are to rehabilitate our criminals, certainly the air that they breathe must be air conditioned—because they're behind bars and can't get out of the Los Angeles SMOG to protect their own health.

Sorry to be the bearer of such gloomy news.

HY JARVIS

Editor's Note: Clipping quoted as follows:

"Prisoners in the forthcoming $19 million County Jail will have to get along without air conditioning, the Board of Supervisors decided today.

"The board reaffirmed a previous order to the Chief Administrative Officer L. S. Hollinger, calling for the elimination of any 'frills' from the building."

Typical Speaker?

Perhaps it's unfair to mention that the speaker at Detroit's annual banquet of Phi Beta Kappa was a Harvard professor.

His name: Dr. Boring.

WHAT . . WHEN . . WHERE

Gas Appliance Manufacturers Association
April 1-3, Americana hotel, Bal Harbour, Fla.

Refrigeration Research Foundation
April 2-5, Statler and Mayflower hotels, Washington, D. C.

Mechanical Contractors of America Convention
April 28-May 1, Shoreham hotel, Washington, D. C.

Oil-Heat Institute of America
April 29-May 4, Olympic hotel, Seattle.

Air-Conditioning & Refrigeration Institute
May 3-6, The Homestead, Hot Springs, Va.

Industrial Heating Equipment Association Meeting
May 17-20, The Homestead, Hot Springs, Va.

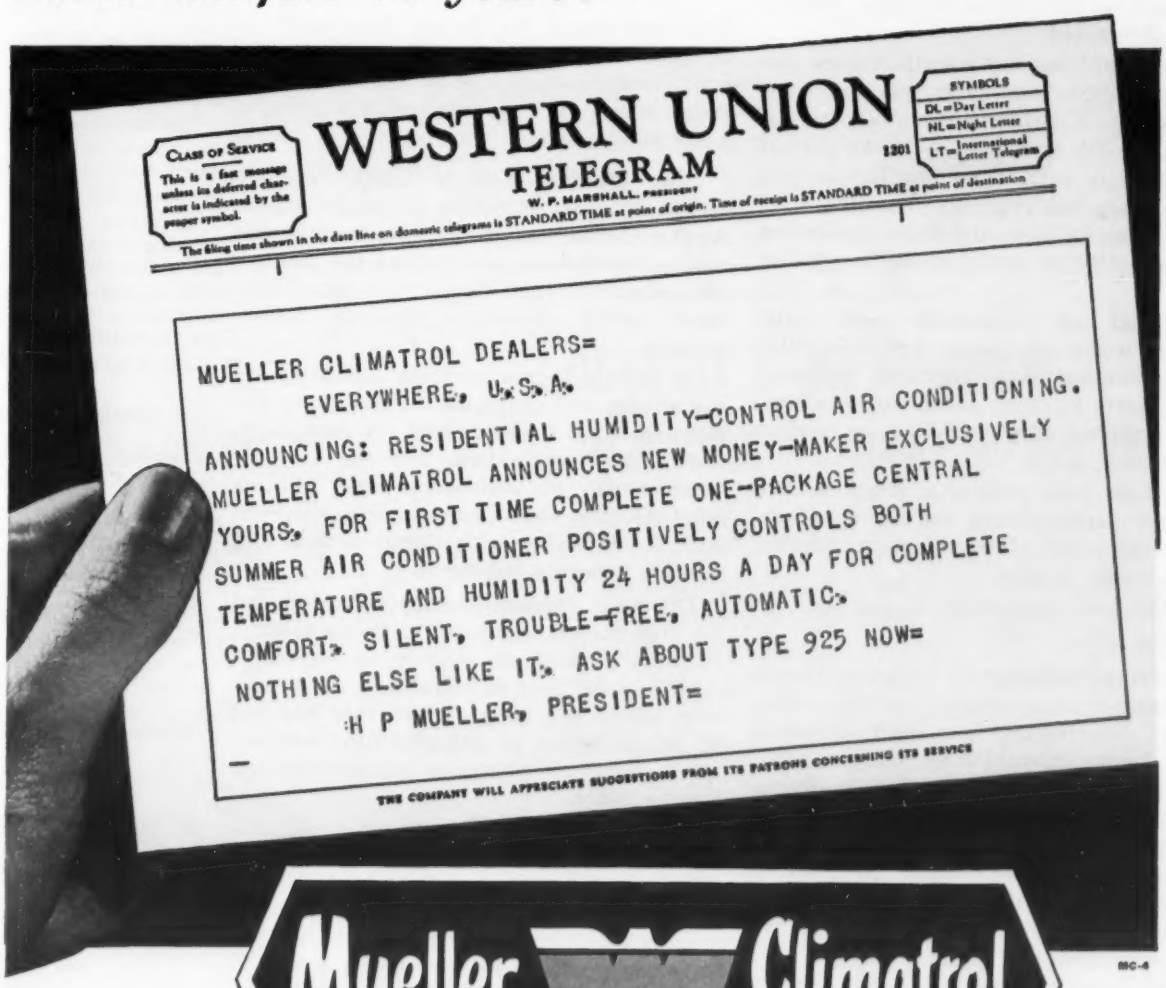
Sheet Metal & Air Conditioning Contractors Annual Convention
May 28-30, Broadmoor hotel, Colorado Springs, Colo.

Institute of Appliance Manufacturers
June 1-3, Netherland-Hilton hotel, Cincinnati.

American Society of Heating, Refrigerating & Air Conditioning Engineers
June 22-24, Lake Placid Club, Lake Placid, N. Y.

NEW PROFITS

from the most exciting development in home comfort in years!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NL = Night Letter
LT = International Letter Telegram
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ANNOUNCING: RESIDENTIAL HUMIDITY-CONTROL AIR CONDITIONING.
MUELLER CLIMATROL ANNOUNCES NEW MONEY-MAKER EXCLUSIVELY
YOURS, FOR FIRST TIME COMPLETE ONE-PACKAGE CENTRAL
SUMMER AIR CONDITIONER POSITIVELY CONTROLS BOTH
TEMPERATURE AND HUMIDITY 24 HOURS A DAY FOR COMPLETE
COMFORT, SILENT, TROUBLE-FREE, AUTOMATIC.
NOTHING ELSE LIKE IT. ASK ABOUT TYPE 925 NOW=
H P MUELLER, PRESIDENT=
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MC-4

They'll Do It Every Time

by Jimmy Hatlo

OVER AT SPRINGLESS MATTRESS··· MY FIRST JOB··· WE HAD THE TOUGHEST OL' SLAVE DRIVER FOR A BOSS··· HE WAS SO MEAN HIS OWN BROTHER WOULDN'T TALK TO HIM····
MY FIRST JOB I GOT TWELVE BUCKS A WEEK··· THE SECOND WEEK EVERYBODY GOT A TEN PER CENT CUT···
WHEN THEY'RE NOT TRYING TO TOP EACH OTHER WITH HOW MUCH DOUGH THEY MAKE NOW··THEY'RE SINGING SAD SONGS ABOUT THEIR CHILDHOOD···
WHAT THEY NEED IS A TOUGH BOSS NOW··· THEY EXPECT TIME OFF FOR THE OFFICE BREAKS THEY MISS ON THEIR VACATION···
I HAD TO SLEEP IN THE STORE··MY FIRST JOB··GOT UP AT FOUR A.M. QUIT AT EIGHT AT NIGHT···
THAT'S THE BORN-IN-A-LOG-CABIN ROUTINE·· MAKING BELIEVE THEY DID IT THE HARD WAY···
HOW SWEET ARE THE WAYS OF ADVERSITY···
THANX AND A TIP OF THE STOVEPIPE TO JIM CLARK, 319 E.50TH ST, NEW YORK, N.Y.
2-9
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By Golly! That Home Automation Dealer-Contractor May Yet Arrive!

INSPIREDLY (or so we fondly dreamed at the time) this editorial page predicted three years ago that out of the bewilderingly helter-skelter miscellany of dealers and contractors who contact the Consumer Durable Goods Industry, an integrated "home automation dealer" might emerge triumphantly, some day, as a national type.

This idea laid an egg, maybe? It gerflunckened out for sure at the time. Nobody seemed interested.

"Who me?" reacted manufacturers, distributors, contractors, consulting engineers, and dealers. "I gottanuff troubles, just trying to push my specialty," said one for all.

Twice since that initial trial balloon this editorial page has proposed "one-stop service" for home builders and home renovators. How marvelous it would be, we suggested, if:

At least one responsible local dealer could and would sell, install, AND SERVICE heating, cooling, and plumbing systems; plus complete kitchens and home laundries; and everything else useful in a modern "pushbutton" home.

All these loose ends thus might be tied up in one merchandising and servicing center—to the profit of manufacturer, dealer, and customer equally.

Comes now vindication of this idea, at long long last, to wit:

A new methodology for American Homes—including heating, cooling, cooking, cleaning, and entertaining—has been suggested as an idea-for-the-future by Westinghouse.

Chris Witting, vice president in charge of consumer products, has announced that Westinghouse will spend $2,500,000 during 1959 on a public information program to introduce this concept of American living.

"We are convinced that we are on the verge of a new and popular demand and trend in home construction," Mr. Witting challenges. "This is the trend toward automated homes, in which electricity will provide not only the many conveniences which make life easier but will heat and cool a house.

"Electric heating, properly planned and installed, is clean, odorless, quiet and, most important, safe. It is not expensive. It is within the budget of millions of people in the country today."

Demonstration projects have been built and will tour the country. They include a "Food Preparation Center," a "Weather Control Center," and an "Entertainment Center."

This "automated home" illuminates, heats, cools, entertains, prepares and preserves food and, above all, saves time so that families can see more of one other and do more things together.

The Entertainment Center is planned so that everything for family fun easily is accessible—a television set built into the wall; next to it a tape recorder, AM FM radio, stereo hi-fi, records and tape storage, home movies, games, card tables, and chairs.

The Weather Control Center masterminds atmosphere in this automated home. At this Center, one can actuate heating and cooling equipment, and control the precipitron electronic air cleaner and germicidal lamp which eliminate airborne health hazards.

Also this Center controls self-adjusting sun shades and draperies. It can de-ice the sidewalk and driveway and, in dry spells, control lawn sprinklers. For the amateur weather man, the instrument panel contains wind direction and velocity gauges, a barometer, inside and outside thermometers, and relative humidity indicators.

The Food Preparation Center is designed for "the person who loves to create meals." There are platform ranges, an electronic oven to cook food in minutes, a 24-in. wall oven which can keep a roast rare and hot up to six hours, an infrared food warmer, waste disposers, plenty of refrigerator and freezer space.

Westinghouse is organizing a national sales force of experienced men to work with builders and cooperating electric utilities on this Automated Home project. These field men will coordinate distributors of all Westinghouse products for the home, and thus make it easy for builders to obtain what they require *from one source at one time.*

Westinghouse may be in the vanguard of this idea first proposed here; but we predict that many a competitor will follow suit.

Idea of an all-in-one Home Automation Dealer or Contractor makes good sense. Particularly is it appealing to the homeowner. Imagine! ONE, and only one, source of responsible SERVICE!

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark reg. U.S. Pat. Office; Est. 1926

AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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INSULATION SEEN AS VITAL TO ELECTRIC HEAT SUCCESS

Owens-Corning Fiberglas Corp.
Toledo

Editor:

The NEWS enjoys the enviable reputation of being first . . . being different . . . and serving the industry.

Your Feb. 2 editorial, "Home Heating with 'Juice' Is Becoming a Juicy Proposition," was a first . . . but it did not mention electric heating's essential partner, insulation.

Advertising and reduced rates help, but could not sell electric heating without insulation. In fact, many reduced rates are contingent upon high insulation standards established by the utility companies. The juicy partnership of insulation and electric heating hopes both partners will be recognized by the "Voice of the Industry" next time.

G. R. MUNGER,
Design Analyst,
Market Development & Design

'GUEST OF HONOR' HAS HOT TIME IN BALI

American Motors Corp.
Detroit 32

Editor:

Your "what a *crazy* drum" story of the Feb. 2 column jogs me into passing this one along:

Last Monday evening at one of the regular informational dinner-meeting sessions for Detroit corporation employes that we call "American Motors Town Hall," the story of Kelvinator International was being told by Bernie Chapman, Tom Etheridge and Ed Wilcox, with movies yet.

Ed had a personal film in color, of a visit to Bali, which included views of a funeral procession that ended with the guest of honor on top of a huge bonfire of cocoanut husks.

Cracked Richard J. Flick, our Rambler assistant merchandising manager:

"Dig that *crazy* barbecue!"

A. F. WILSON,
Public Relations Director
Kelvinator Division.

Handy Way to Subscribe

To See the Industry In Action EVERY WEEK

Keep up-to-date on what's going on in your industry. You'll see action weekly in AIR CONDITIONING, HEATING & REFRIGERATION NEWS. Covers latest news and gives you top how-to-do-it reports on residential, commercial, and industrial air conditioning, heating, and refrigeration for contractors, dealers, consulting engineers, distributors, servicemen, and manufacturers. Read the industry's only newspaper every week—you'll profit by it—only $6.00 per year, 52 issues (U.S. and Canada). Foreign: $10 per year.

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ARI Booklet Aims To Acquaint Purchasers With Certified Air Conditioner Program

WASHINGTON, D. C. — A pocket-size booklet titled "A New Assurance . . . for the specifier, seller, installer, and buyer of unitary air conditioners" is being distributed by the Air-Conditioning & Refrigeration Institute as a part of its campaign to acquaint purchasers and prospective purchasers of unitary air conditioning equipment with the Unitary Air Conditioner Certification Program.

The program was developed by ARI in cooperation with the National Warm Air Heating & Air Conditioning Association.

The booklet is being distributed through their sales and distribution outlets by the 35 manufacturing companies participating in the program for testing and rating unitary equipment; by ARI to architects, consulting engineers, builders, and government personnel at all levels interested in unitary equipment, and is being made available to the public through Better Business Bureaus and dealers and contractors handling certified equipment.

Distribution of the booklet approximates that of the "Directory of Certified Unitary Air Conditioners," which lists ratings of units under the program.

Drayer-Hanson Completes $90,000 Defense Contract for Bendix Aviation

LOS ANGELES—Completion of $90,000 contract awarded by director of purchases, Bendix Aviation Corp., Pacific Div., here, to Drayer-Hanson is announced by C. W. Polk, Air Conditioning & Refrigeration Div. manager.

The order called for the manufacture of special air-cooler assemblies and auxiliary parts for ultimate use in Combat Information Centers.

Equipment fabricated, in many respects, follows 640 special air-to-air heat exchangers delivered under prior contracts. These were used as the cooling source for range asimuth indicators on ships of the U. S. Navy—the hermetically-sealed units replacing corrosion-prone motor operated valves, it was stated.

Harry Harris Sets Out As Manufacturers' Rep.

WICHITA, Kan. — Harry M. Harris announced that he recently began operations as a manufacturers' representative in Kansas, Oklahoma, Texas, Missouri, and Arkansas for Southwest Mfg. Co. and Century Engineering Corp. He will also handle allied lines and mechanical equipment.

Harris has had 15 years' experience in the heating and air conditioning industry with several manufacturers. For the last seven years, he was associated with Mueller Climatrol, covering the midwestern states as district sales manager and regional manager, it was pointed out.

He operates from 362 Oakwood Dr. here.

Rust-Oleum Publishes Rust Index for U. S.

EVANSTON, Ill. — A "rust index" listing the different rates at which metal rusts for each of 523 U. S. cities throughout the country has been published by Rust-Oleum Corp. here. Rates vary from three to 15 years.

Copies of the index may be obtained by writing on your letterhead to Rust-Oleum Corp., 2799 Oakton St., Evanston, Ill.

Hydronics Group's Name Was Long, Now It's Longer

WEST HEMPSTEAD, N. Y.— Because of interest shown by hydronics leaders in other areas of metropolitan New York, the board of directors of the local Long Island Better Heating-Cooling Council has voted to expand and change its name to the BHC of New York, Long Island & Westchester, Inc.

The decision was reached at a board meeting held here, according to contractor Alfred H. Hewitt, newly-elected president of the group. Hewitt is also head of Altom Plumbing & Heating Corp., Mineola, N. Y.

Named to serve with Hewitt were Vice President Alfred Sirlin, a contractor, Lakeville Plumbing Co., Inc., and Secretary-Treasurer Ray Bohr, a manufacturer, president of Federal Boiler Co., Inc., Midland Park, N. J. Bohr will also head the Membership Committee.

Film Tells How To Help Self To Profit

CHICAGO — A 12-minute sound-slide film in color called "Help Yourself to Profit" became available recently for use at industry meetings to tell the story of the Plumbing-Heating-Cooling Information Bureau, the bureau announced.

Organizations or individuals wishing to use the film should write to the PHCIB, 35 E. Wacker Dr., Chicago 1. There is no charge for use of the film and the only equipment needed for showing is a 35 mm sound-slide projector and a screen.

It is hoped that the film will be used at meetings of contractors, journeymen, wholesalers, and manufacturers.

Wilkins Joins Acme As Nat. Service Mgr.

JACKSON, Mich.—Ralph A. Wilkins has been appointed national service manager of Acme Industries, Inc., according to R. C. Robertson, director of sales.

R. A. Wilkins

Wilkins was formerly service manager of the Detroit branch of Frigidaire Sales Corp.

Wilkins will direct activities of Acme's field service representatives and supervise the operation of the service shop at the Jackson plant. He will also be responsible for replacement parts sales.

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MEAT CABINET
You can see the liquid condition easily through the window in Detroit's 718-W Expansion Valve.
RECEIVER
SIGHT GLASS

DETROIT'S NEW 718-W INSPECTION WINDOW VALVE

Saves Steps

Ever run into the problem of finding that there is enough refrigerant—according to the sight glass at the receiver—yet having one of the remote cabinets not functioning as it should? Frequently the problem is not enough liquid at the far end of the line.

Detroit has saved you plenty of steps and time by building an inspection window right into the 718-W Expansion Valve. It simplifies the job of tracking down trouble!

This is another expansion valve in the COMPACT CAPACITY line which gives you the smallest valve per ton of refrigeration. Applications range from ½ to 3 tons for R-12 and ½ to 5 tons for R-22. *Better take a look-see today.*

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Subjective Feelings and Air Conditioning

Importance of Individual's Reaction to His Environment A Factor In Re-Evaluation of ASHAE Comfort Chart, Engineers Hear

PHILADELPHIA—Subjective feelings—the individual's reaction to his environment—may carry more reliability than heretofore thought in the design of comfort conditioning systems.

Such was an important conclusion of a session on body comfort held recently at the 65th annual meeting of the American Society of Heating & Air-Conditioning Engineers.

Significantly, Prof. B. H. Jennings, director of research, ASHAE Research Laboratories, admitted that the society's reinvestigation of its classic Comfort Chart is at least in part due to the fact that subjective feelings are now considered to have more trustworthiness in determining comfort.

Cold Feet, Hot Heads Are Case In Point

A case in point was brought up by Thomas Bedford, director of the Medical Research Council's Environmental Hygiene Research Unit, London, England. In discussing the several methods of obtaining comfort, Bedfard pointed out that factory workers, while complaining of cold feet, will insist that they do not want the general temperature of the work area to be higher.

Conversely, Bedford has found that when the foot temperature, or the temperature of the soles, is above 86°, discomfort results. Considering the various types of shoes and hose worn, he recommends that floor surface temperatures should never exceed 77-80°.

At the other end, hot heads result from ceiling radiant heat panels whose mean temperature is more than 5° above ambient.

"When we consider that we are working with objectively determined environment, objective physiological topography, and subjective reactions, we find that we need a 12° comfort range in practice. It is unrealistic," he held, "to design to a theoretical optimum condition which our charts show us will satisfy 52% of the occupants, and ignore the 48% who we know will be uncomfortable.

Suggests Use of 'Discomfort Curve'

"It strikes me that we could advantageously begin to use *discomfort* curves, rather than graphs showing the proportion of comfortable people," Bedford continued.

"We can go to the other extreme and design heating for a 100-ton house to satisfy a 100-lb. grandmother," chided Bedford, who went on to say that in his day when grandmother became chilly she threw a shawl over her shoulders.

Dr. Nello Pace, professor of physiology, University of California, attempted to show that stress has a physiological effect on body processes, that these effects can be measured, and that knowledge of such effects can be used in widely diversified fields as psychology and environmental engineering.

Data presented in Dr. Pace's discussion were gathered under battlefield conditions in Korea, and they showed specific responses of individuals to several environmental stresses.

Pace admitted that this approach to the subject treats the human body as an engine or machine, and does not consider subjective reactions, as such—although in actuality the two cannot be so divorced.

From the floor came the objection that it is not possible—at least at this stage of knowledge—to depend on physiological data in designing comfort for occupants. "A simple thing like a change of clothing can undo the best engineering in the world."

C. S. Leopold, consulting engineer, repeated a well-known admonition: "While the physicist—to study various phenomena—must split them and study each separately, the biologist knows that the living organism reacts to its environment as a whole. Thus, the human body does not react a certain way to humidity, another way to air movement, and still another way to temperature. Rather, it reacts to all of these simultaneously, and we must be careful in our studies not to place undue emphasis on any single factor."

Entire Area of Comfort Being Re-Investigated

Dr. Jennings indicated that the entire area of comfort is being re-investigated at the ASHAE Research Labs, since discrepancies have been found at least in some ranges of the Comfort Chart, "which has served since its inception as a criterion for setting design and performance characteristics of installations for human occupancy."

It was interesting to note that some of the data gathered by Jennings' staff agrees significantly with data gathered by Bedford in England some years ago.

When questions arose as to the reliability of statistical and sampling techniques used in presenting comfort data, Jennings emphasized that as an engineering society, ASHAE's primary responsibility is to present what he called "mass impressions" of data which are significant to society membership and the general public. "Information on statistical variations, ranges around plotted points, and similar data, is on hand and is available to pertinent personnel."

VA Building To Be Cooled

LITTLE ROCK, Ark.—At a cost of approximately $69,000, the new Physical Medicine and Rehabilitation building at the Veterans Administration hospital, North Little Rock, will be air conditioned before summer. The building houses an average of about 1,200 patients.

This look kills sales . . .

The following manufacturers have signed up and are participating in the program:

Airtemp Division, Chrysler Corporation • Amana Refrigeration, Incorporated • American Blower Division of American Radiator and Standard Sanitary Corporation (American-Standard Industrial Division) • American Furnace Company • Arkla Air-Conditioning Corporation • Bryant Manufacturing Company, Division of Carrier Corporation • Carrier Corporation • Curtis Manufacturing Company • Day and Night Division, Carrier Corporation • Friedrich Refrigerators, Inc. • General Automatic Products Company • General Electric Company • Gibson Refrigerator Company, Division of Hupp Corporation • Hall-Neal Furnace Company • International Heater Company • Lennox Industries, Inc. • The

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Heating 'Clean Up' Group Urges

Give Us Honest, Uniform Inspections, Then Get Tough with Code Violators

By George M. Hanning

WARREN, Mich.—A plea for heating inspectors to get tough with builders and heating contractors who put in shoddy installations not up to code was made by George Asher, executive secretary of the Detroit area Better Heating & Cooling Bureau.

Asher addressed a gathering here of local inspectors from the Detroit metropolitan area attending a meeting of the Heating Reciprocal Council.

The Council represents communities having a common heating code. They permit contractors licensed in one community to practice in other member communities upon registering their licenses in those communities.

At the meeting, the Council accepted to membership the cities of Pontiac and Bloomfield Hills and the village of Westwood. This brought total membership to 79 communities.

The Council also approved a resolution permitting communities that have both a heating code and a refrigeration code to alter their heating code so as to waive experience requirements for licensed refrigeration contractors applying for either a restricted or Class A heating license.

This move reciprocates a provision in the recommended code of the Refrigeration Reciprocating Council—made up of several of these same Detroit area communities—that waives experience requirements for licensed heating contractors who wish to apply for a restricted or Class B refrigeration license.

Reciprocity Results Good

Frank Drogosch, chief safety engineer for the city of Detroit, who proposed the change, commented that this reciprocity has been practiced in Detroit for the past several years and has brought good results.

He said that from 15 to 20 heating contractors have received restricted refrigeration licenses. A restricted license permits them to install, but not service, self-contained packaged air conditioners of up to 7½ hp. where they do not have to break any refrigerant lines. However, no refrigeration contractors have applied for a restricted heating license.

Asher told the inspectors that the Better Heating & Cooling Bureau is making sincere efforts to clean up the warm air heating industry in the Detroit area. But, he said, it needs help from local inspectors.

"Give us good, tough, rigid inspections," he urged, "but give us honest, uniform inspection."

He castigated equally communities that charge permit fees but make no inspections and those that issue violation tickets for minor infractions while overlooking major hazards of the installation.

Those communities that accept money for permits and don't even make a pass at inspection are not fulfilling their public trust, he charged.

Contractors who hew the line in cities where strict inspections are made are tempted to cut corners in communities where they know their work will not be inspected or will be hidden behind plaster before the inspector arrives.

"I don't buy the idea that the homeowner should know what he is buying when he buys a home or the philosophy of 'let the buyer beware.' Dazzled by a flashy kitchen, the prospective buyer does not question whether hot air returns are adequate or proper duct clearances have been allowed," Asher argued.

Stop 'Buck Passing'

He called for an end to such "buck passing" both to the homeowner and FHA. "If your inspection fees are not high enough to cover the cost of proper inspection, push them up 'til they do cover the cost," he urged.

At the same time, he condemned enforcement of outdated requirements of a minor nature, while ignoring real safety violations.

"For instance," he said, "one community has been refusing to o.k. oil burner installations where a fire extinguisher is not provided.

"If the fire protection in your community is not adequate to handle these fires, when they occur, then every home should be required to have a fire extinguisher, not just those with an oil burner.

"Unless regular periodic inspection of the fire extinguisher is also provided, some types can become not only dangerous to use, but deadly," he warned.

BHCB Will Cooperate Every Way Possible

Asher told the inspectors that the Better Heating & Cooling Bureau stood ready to cooperate with them in every way possible. Currently, BHCB is making its own inspections of complaints and is pointing out violations to local authorities. It is also checking model homes in new developments.

The Bureau plans to inaugurate soon a series of regular meetings with local inspectors to show them what to look for and to point out to them violations in actual installations.

The Bureau also plans shortly to issue a checklist of inspection points to help inspectors make thorough, uniform inspections and to do it with the least expenditure of time.

Asher said the BHCB also would confer with FHA inspectors to offer them the same assistance.

This seal saves them . . .

How many times have you seen this look?
The customer's heard so many conflicting claims for unitary* air-conditioners in terms of "horsepower," "cubic feet," "btu's" and "tons," he doesn't know what to believe. He gets That Look. He backs away, muttering, "I'll think about it." You know what that means. No Sale.
How many times have you said, "Something ought to be done about this."? Now, something *has* been done about it.
And here it is. The ARI Seal of Certification . . . the integral part of an industry-wide program developed by the Air-Conditioning and Refrigeration Institute in cooperation with the National Warm Air Heating and Air Conditioning Association, for unitary equipment with a maximum capacity of 135,000 btu's. Here's how this program works, to help you:

1. ENDS CONFUSION, MAKES SELLING EASIER. Every participating manufacturer (and there are now 33 of them, producing over 80% of total U. S. unitary equipment), will have the Seal of Certification on his models. This certifies that the unit's rated capacity is in accordance with ARI Standard 210-58 for electrically-driven equipment or ARI Standard 250-58 for heat-powered equipment; it also meets other important minimum performance requirements of the Standards. With a uniform standard of rated capacities and performance to talk about, you'll be able to give customers a clearer picture. And they'll be able to make a definite decision to *buy*, because they can now compare units by one uniform standard.

2. RESTORES PUBLIC CONFIDENCE IN THE INDUSTRY. Your customers will like the idea that their investment in your product is backed not only by the integrity of the manufacturer . . . but also by the industry's trade associations.

3. SAFEGUARDS YOU, AND ALL OTHER REPUTABLE MEMBERS OF THE INDUSTRY. The Seal of Certification gives you a big selling edge over "fast buck" dealers and units with claimed capacities not established in accordance with proper industry standards. Now you'll have a real "talking point" for quality products.

4. THE INDUSTRY BECOMES SELF-REGULATORY. There are checks and double-checks all along the way. There'll be random testing of units by an independent testing laboratory, with results reported to ARI. Participating manufacturers will also check each other's equipment and report to ARI. Any unit which does not come up to ARI standards as stated, will lose the protection of the Seal of Certification, unless the defect is remedied. And, since participating manufacturers have signed up on a firm contract basis, this provides proper means for enforcement.

5. INCREASED SELLING POTENTIAL. A Directory of participating manufacturers is now available. Supplements will be issued monthly, as required, listing new models and additional participants. This directory is already in the hands of over 13,000 engineers, architects, building contractors, mortgage brokers and members of government agencies. These are key individuals, who influence the purchase of millions of dollars worth of unitary air-conditioning equipment for projects on local, state and national levels. In addition, there is an explanatory brochure, which presents the complete ARI program in detail. Both booklet and Directory are free, and will be invaluable in influencing your customers.

All certified units must pass the following tests, in addition to being rated at Standard Rating Conditions set forth in the applicable ARI Standard.

A. Maximum operating conditions test
B. Low temperature operation test
C. Insulation efficiency test
D. Condensate disposal test
E. The unit must meet these requirements while operating against specified minimum external airflow resistance to allow for connected duct work.

For your free copy of the Directory and explanatory booklet, write to: Chief Engineer, Dept. A3, Air-Conditioning and Refrigeration Institute, 1346 Connecticut Ave., N. W., Washington 6, D. C.

*"Unitary" air-conditioners are described as all packaged air-conditioners (whether in single units or in combined units called "split" systems), but not including room air-conditioners or heat pumps.

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H 1.5	⅛"	1.5	90°
H 2.5	⅛"	2.5	100°
H 3	¼"	3.3	76°
H 5	¼"	5.0	85°
H 7	¼"	7.0	100°

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A Look at One Market—New Orleans

1. Residential — Steady Progress from Hard-Plugging Sales Methods

2. Commercial — Replacement Market, New Products Can Help

3. Industrial — Seek 'Breakthrough' In Key Plant Cooling

NEW ORLEANS—There are some engaged in the air conditioning business in New Orleans who feel that the sales situation for comfort cooling equipment here is in the process of "treading water" waiting for a major breakthrough in one of several types of markets.

At the same time, even those who may take the most pessimistic view of the current situation admit that a pretty fair sales volume is being churned up during the "treading water" period. And certainly the market saturation is low in several segments of the field.

For example, less than 20% of the homes in New Orleans have any kind of mechanical comfort cooling (this includes room air conditioners), according to figures compiled by New Orleans Public Service, Inc., the public utility which serves the city. The market saturation in central residential cooling is probably not over 3%.

For industrial applications, the saturation figure is thought not to be much greater than that for central residential air conditioning. For commercial applications of all kinds, including offices, the saturation is generally concluded to be high—perhaps as much as 70%—but again a good share of this may be the "relief cooling" provided by room air conditioners, as contrasted to the complete air conditioning furnished by a central or package system.

So, if there is going to be any kind of an explosive "breakthrough" in any particular segment of the market, the most likely place for this to occur would be central residential systems, and possibly in the industrial market.

A replacement market looms as a possibility for commercial applications, but how big this will be will depend upon how prosperous the community is, and to some degree upon the kind of sales job done by air conditioning contractors. Some activity is stirring on heat pumps, although not so great as in other areas where climatic conditions for heat pump operation are no better.

Definite Fall-Off Came During 1958

An analysis of the recent record of sales of central residential systems, compiled by the utility company, indicates that a definite fall-off came in 1958 after a steady advance for several years had preceded a spurt of considerable proportions in 1957. Here are the figures (for units 3 hp. and up):

1958	496
1957	641
1956	476
1955	449
1954	224
1953	170
1952	106

The totals on actual number of residential installations are probably somewhat higher, since the utility compilations do not take into account any 2-hp. units that may have been used for central residential installations.

A breakdown of the residential installations by sizes, as compiled by the utility company for 1958 and 1957, are shown in the following tabulation:

	1958	1957
3 Hp.	257	344
5 Hp.	196	261
7½ Hp.	32	31
10 Hp.	10	4
15 Hp.	1	1
Total Units	496	641

A comparison with previous years reveals that the percentage of 5-hp. units to the total has increased. This is in line with the observations by some dealers in New Orleans that in comfort cooling New Orleans' residents want a bigger temperature differential than the generally accepted maximum of 15°.

"I'm finding that in order to satisfy many purchasers of air conditioning, particularly those of residential systems, I have to design for a 25° F. temperature differential," says Charles L. Gamble of General Heating & Air Conditioning Co.

Most Buyers Really 'Want To Feel' Cooling

"It seems that most buyers of comfort cooling really want to 'feel it.'"

Like many of his fellow contractor-dealers, Gamble is finding the better deal in residential air conditioning to be in existing home installations. The reasons are simple: less dog-eat-dog competition and subsequent price-cutting or big-shaving, more opportunity to sell the right kind of an installation, greater dollar volume per job and greater profit.

It's only in the existing home that the dealer is able to install a job that Gamble describes—one that cost nearly $10,000, with its completion marked by a party to which the owner invited 125 guests, with the installation having enough capacity to handle this load in an adequate style.

One phase of his operations which Gamble thinks gives him

(Continued on next page)

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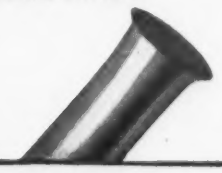

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The seal is made in such a way that it does not change the diameter of the tube. This makes it possible to pass the tube through any opening large enough for the tube itself. Economical tube sizes range from ⅛" to ¾" O. D.

Also you'll find the job-size, 50-foot, one-coil pack easy to handle, light weight, economical and sturdily made to assure protection of the tube.

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(Continued from preceding page)
an edge in existing home jobs is the reputation which he says he has developed for "making no mess" in cutting in ductwork and carrying out other parts of the installation job. Techniques which came out of experience in his earlier years in ship repair and rehabilitation have proved useful in one regard, particularly the use of a special box-like enclosure performing a cutting operation.

Lack of Sheet Metal Shops Leads to Use Of Pre-Fabricated Ducts

Because central heating has not been the "custom" in New Orleans (the utility reports that not more than 12% of the homes on its lines have central heating) Gamble says that sheet metal shops have not been any great factor in the air conditioning business, and that many cooling dealers have found it a problem to get competent sheet metal work. There seems to be some indication that the proportion of pre-fabricated ductwork used is relatively high.

High Land Costs Slow Air Conditioning Sales

One principal factor that has held down the new home market is the fact that the cost of the land, in relation to the total cost of a new home, is so high. This is the result of a scarcity of available land for homesites, and cost of reclaiming land for homesites.

Thus, a purchaser of a new home has been prone to hold any "extras" to a minimum, so that he can get "as much house" as possible for the amount of money that he can spend. However, one encouraging factor has been that many new homes are being equipped with the proper ductwork, wiring, and drains that will permit later installation of air conditioning at an economical figure.

"Heat pump possibilities are beginning to look pretty good," Gamble asserted, "although we haven't had any concerted promotion on this type of air conditioning, such as other cities have.

"Climate is certainly right for it, and in commercial applications particularly, the lighting and other loads seem to supply all the supplementary heat necessary, so that no other heat source is necessary."

Gamble said that where single heat pumps had not proved sufficient to handle a particular job, there had been no particular problems in handling it with multiple units.

To Gamble, a major problem facing the dealer is in the financing of installations, particularly in the commercial part of the market. With much of the "cream" of the commercial market gone, many of the jobs remaining often pose a credit problem.

"When money tightens up just a little, the banks turn up their noses at such jobs," the dealer says, "and the factories set up policies which don't leave much room for such jobs. And most dealers can't afford to handle such paper on their own."

Sees Need for Steady Plugging To Build Residential Market

One man who feels certain that central residential air conditioning sales will boom in New Orleans—although he thinks it will come as a result of steady plugging by dealers rather than as a result of any spectacular sales methods—is Col. J. T. Knight, manager, air conditioning and refrigeration division, Equitable Equipment Co.

The firm is one of the major shipbuilders in the New Orleans area, but for a long time had also been active as an air conditioning contractor. Out of this activity stemmed its operations as a wholesaler of Westinghouse air conditioning equipment, on which phase of the business Equitable now concentrates its efforts.

A graduate of West Point with a distinguished record in the Corps of Engineers, Knight is inclined to look at the air conditioning industry in an objective manner, certainly believing that it will continue to grow in sales in all markets, but not likely to "explode over night" in the residential field, in particular. He details why in an account of some personal experience:

"We gave the hard, fast sell a good try," he recounts, "bringing in a specialist in door-to-door selling and working with some of our dealers in training crews of salesmen.

"But it didn't sell residential air conditioning systems—and I doubt if such tactics ever will, in this part of the country anyway. People here just don't like being rushed into things, and particularly on a matter that involves a purchase running to as much money as is involved in an air conditioning system. Some of the homeowners got so disturbed by the methods used by the salesmen that they called up to complain about them."

Some of the conventional methods of advertising and sales promotion have yet to prove themselves in air conditioning, so far as Knight is concerned. The distributor tried a couple of thorough and well-planned direct mail campaigns, which failed to bring much response, and to which practically no sales were traceable.

Thus, the matter of selling central residential air conditioning falls almost entirely on the shoulders of the individual dealers handling such equipment.

(Concluded on next page)

STOP

Losing money during your slow season-

LOOK

At how easy it is to keep your mechanics profitably employed all year repairing hermetic compressors with a FRANKELL HERMETIC COMPRESSOR OPENER. Keep your shelves filled with rebuilt units so that during the busy season you can do more jobs in less time at a greater profit. A FRANKELL HERMETIC COMPRESSOR OPENER opens any hermetic compressor up to 20" in diameter. No special jigs or skill required.

LISTEN

To the ring of profits the year 'round. Remember, when you repair hermetic compressors, the profits are big. So ACT NOW! Only $695 Ex Factory. Ask about our rental plan. Export facilities.

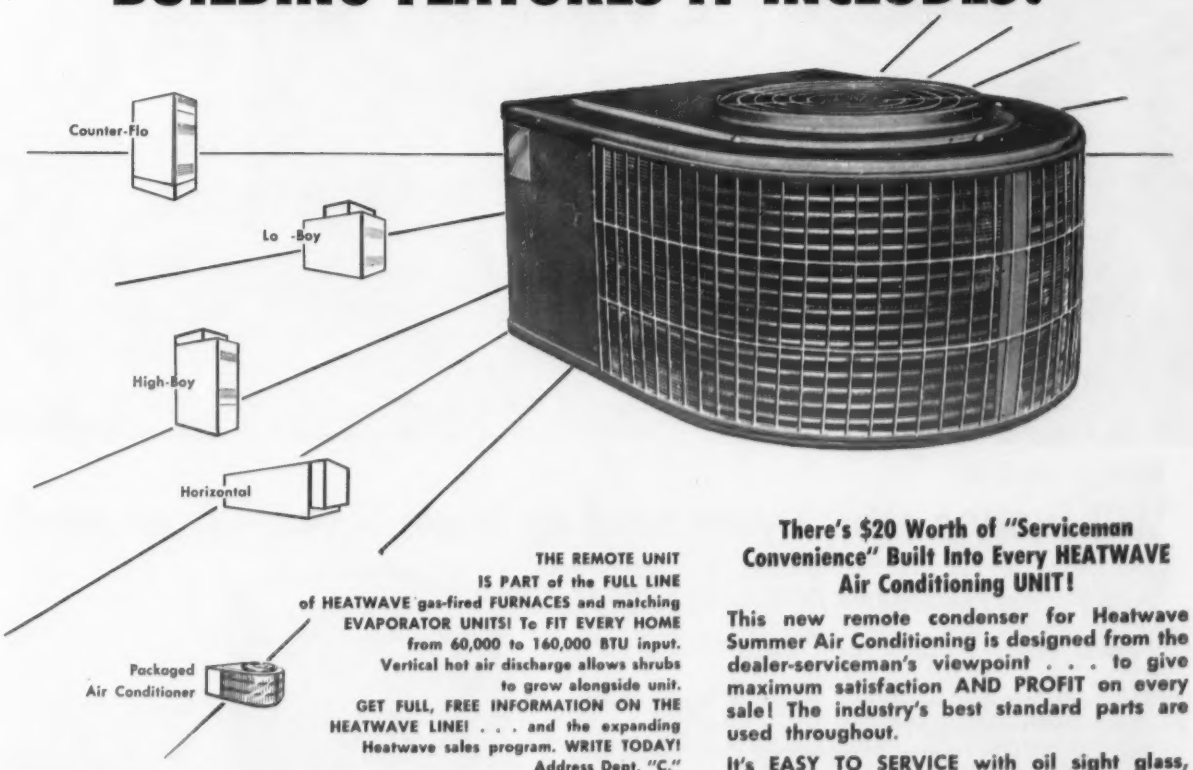
FRANKELL MFG. CO., INC.

1074 Home Street, New York 59, N. Y.

WRITE DEPT. S for complete information.

Service, repair and adjustments can sap profits and shrink markup! But the man who sells HEATWAVE (just look at this new waterless condenser) is SURE OF HIS MONEY!

YOU MIGHT HAVE DESIGNED THIS UNIT YOURSELF . . . FOR ALL THE PROFIT-BUILDING FEATURES IT INCLUDES!



THE REMOTE UNIT IS PART of the FULL LINE of HEATWAVE gas-fired FURNACES and matching EVAPORATOR UNITS! To FIT EVERY HOME from 60,000 to 160,000 BTU input. Vertical hot air discharge allows shrubs to grow alongside unit. GET FULL, FREE INFORMATION ON THE HEATWAVE LINE! . . . and the expanding Heatwave sales program. WRITE TODAY! Address Dept. "C."

There's $20 Worth of "Serviceman Convenience" Built Into Every HEATWAVE Air Conditioning UNIT!

This new remote condenser for Heatwave Summer Air Conditioning is designed from the dealer-serviceman's viewpoint . . . to give maximum satisfaction AND PROFIT on every sale! The industry's best standard parts are used throughout.

It's EASY TO SERVICE with oil sight glass, detachable valves, liquid sight glass, moisture indicator and dryer all calculated to minimize problems.

THERE IS LESS MECHANICAL FAILURE due to a new, larger condenser face area which gives lower operating head pressure and lower liquid temperature.

HOMEOWNERS RECOGNIZE HEATWAVE SUPERIORITY and appreciate the lower operating cost!

HEATING

HEATWAVE

AIR CONDITIONING

A Product of The Southwest Manufacturing Company, Aurora, Missouri
A Subsidiary of The F. E. Myers & Bro. Co., Ashland, Ohio
Manufacturers of The Famous Myers Pump

Air Conditioning In New Orleans--

(Concluded from preceding page)

The distributor's role, as Knight sees it, is to select and develop the kind of dealers who will best do the job, and to provide them with the kind of assistance that fits the way they do the job.

"There's one kind of move which we're encouraging our dealers to make," says Knight, "and that's to build and maintain contacts with the kind of people who can help him to make a sale of air conditioning equipment.

"This means more than trying to find owners of homes and business establishments who may be thinking about purchasing air conditioning, or keeping in touch with architects and builders. It means getting to know and gaining the friendship of electrical contractors, plumbing contractors, home repair firms, and others who are factors in new construction, and in fixing up old homes.

"These people cannot only furnish information that leads to sales, but can influence the buyer's selection of equipment and the installing dealer."

The territory which Equitable Equipment Co. handles as a wholesaler of air conditioning extends into other parts of Louisiana, and into the state of Mississippi, and it embraces a lot of small towns. It has been the firm's experience that there is no particular type of background or experience that especially qualifies a man to be a successful dealer in air conditioning. Primarily it is a matter of whether or not the individuals concerned feel that selling air conditioning is important to them as a matter of making a living, and how hard they will work at it.

It is Knight's feeling that some of the good air conditioning dealers of the future will come out of the ranks of mechanics or salesmen, and who will be men who will be willing to take a chance with some of their savings, and who will spend the extra hours necessary to achieve success. It is one of the distributor's duties to recognize such people, and to foster their ambitions.

In that segment of the market which the industry knows as "big building" or "big system" air conditioning, New Orleans has been something of a leader. Most of the big commercial buildings are air conditioned, some of the hotels were among the first to be fully air conditioned and all the major ones are now fully air conditioned, and some of the pioneer work in school air conditioning was done at Tulane university.

According to Tom Stokes of Cary Gamble Associates, one of the leading consulting engineering firms in the South, with headquarters in New Orleans, the high velocity induction type air distribution system is becoming a factor in the jobs in which his firm has figured. He estimates that of the big central system air conditioning that has gone in during the past couple of years, about half are of the high velocity duct, and most of the rest are double duct systems.

New Orleans has had a boom in motel building as its popularity as a resort and "fun" spot has grown, and most of the newer motels are using packaged chilled water systems, with fan and coil units. Some have installed individual room units, with a hot water coil fed by a central system.

But Stokes and others are hoping that a big new market will develop in industrial air conditioning. Most of the plants in the Southeast part of the country are in the category of "light" industry (textiles, wood or light metal fabrication), and would lend themselves ideally to the installation of air conditioning systems. And many air conditioning men believe that air conditioning would lead to improved efficiency and productivity.

(In this connection Col. J. T. Knight relates the story of an installation made for a match-producing plant. The firm had three production lines, and air conditioned one as an experiment. Productivity rose so much on the air conditioned line, that the firm ran a three-shift operation on it, shutting down the other two lines—proving what air conditioning could do, but also cutting down on the amount of air conditioning that Knight expected to put in.)

Some Cooling In 15% Of Plants Might Break Market Wide Open

"If the industry can get some air conditioning in 15% of the plants in the area, we think the whole market would break wide open," says Stokes.

Some indication that the overall situation in New Orleans may not have been too bad in 1958 came from H. A. Dawson, head of Acme Refrigeration Supplies, Inc., parts and equipment supplies wholesaler. Dawson reported that his 1958 sales ran better than 10% ahead of 1957 in New Orleans.

Two trends which Dawson noted in 1958 were (1) a considerable increase in sales for replacement purposes of condensing units, cooling towers, and pumps; (2) indications that residential air conditioning was becoming the biggest part of the market.

BEFORE YOU BUY, THINK:

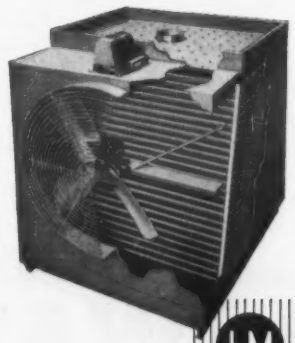
Will fungus attack your cooling tower 2 years from now?

Not if it's a Halstead & Mitchell cooling tower with a 20-Year Guarantee

The specially treated wood decking in H&M towers resists rotting, fungus attack and algae which accumulates and obstructs air flow in most other towers. Performance remains "like new" in H&M cooling towers year after year.

Only Halstead & Mitchell offers a 20-Year Guarantee on the wetted deck against failure due to rotting or fungus attack.

Other H&M features for unusually low maintenance include permanently sealed fan bearings, and a heavy gauge steel cabinet protected against corrosion by three plastic coats applied *after assembly*. Be sure. Ask your local wholesaler for H & M towers, or write to Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pa.



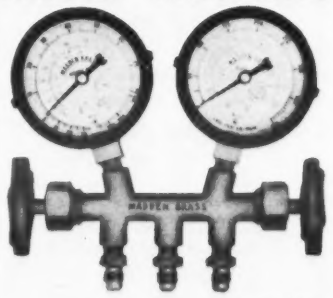
H & M COOLING TOWER WITH PRESSURE TREATED DECKING

HM Halstead & Mitchell

Water-Cooled Condensers · Cooling Towers · Air-Cooled Condensers · Finned Coil Products

NEW

...FOR EASIER FASTER SERVICING



Pat. Pending

Designed for convenient charging, purging, testing etc., this new compact unit features an all brass forged body, easy-grip hand wheels, Teflon packing and seat for positive shut-off. Equipped with dual scale 2½-inch pressure and compound gauges. Hose connections ¼-inch male flare, gauge connections ⅛-inch female pipe thread.

HANDY HOSE HOLDER

Attaches to back of testing unit so free end of hoses can be conveniently coupled when not in use. Keeps them dry and free from dirt.

SEE YOUR **MADDEN** WHOLESALER

MADDEN BRASS PRODUCTS COMPANY
AURORA 6, ILLINOIS, U.S.A.
EXPORT: Ad Auriema 85 Broad St. New York, N. Y.

What Type of Builder Goes For Cooling?

'Century Club' Honors Phoenix Builders Who Have Installed 100 Residential Systems

PHOENIX, Ariz.—Some indication of the manner in which central residential air conditioning is taking hold in new construction in this area may be gleaned from the recognition here late last year of three new members of the "Weathermaker Century Club" — comprised of builders who have installed Carrier refrigerated air conditioning in a minimum of 100 homes.

The three builders were Young Construction Co., American Builders, Inc., and Rosing Builders, Inc. They received special plaques in a presentation made by J. A. Gazelle, western sales manager of Carrier, with some 100 builders and company district representatives and distributors in attendance at a party sponsored by Black & Ryan Air Conditioning Co., Carrier distributor.

Commenting on the gains shown in installations of central residential systems in the area, and the activities of these builders who have made installations in at least 100 homes, F. Fingado, Carrier district manager, made these points:

Use of refrigerated air conditioning (in contrast to evaporative cooling) is getting to be an accepted standard practice in homes costing approximately $16,000 and more which are being built in the greater Phoenix area.

Homes built by Rosing Construction and American Builders are generally constructed in attractive residential subdivisions in various parts of the city. Their homes feature many quality built-ins such as built-in ovens, exhaust hoods, and the like.

J. A. GAZELLE, western sales manager of Carrier Corp., presents "Century Club" plaques to E. T. Wright, president of American Builders, Inc.; Bernie Young, president of Young Construction Co.; and Fred Naumetz, executive vice president of Phoenix Assn. of Home Builders, who accepted the plaque on behalf of Ken Rosing, president of Rosing Builders, Inc.

With many of these homes being sold to people moving in from the East, Fingado says that the builders deem it advisable to use equipment that is nationally known, and also to have it installed by a strong contractor organization, particularly since with many of the buyers it will be their first experience with air conditioning.

The Young Construction Co. has won considerable acclaim for its work with such advanced construction projects as the widely publicized "Solar House" and its most recent development, the "Stereophonic House," which is also air conditioned.

The Young Co. has also made extensive use of the heat pump in the Phoenix and Scottsdale resort areas. Many of the desert areas where these homes are built are not supplied with natural gas, and the Salt River Power District (an electric utility company) gives these homeowners a special 1 cent kwh. rate, which makes the heat pump installation attractive.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

102 Million Gas Appliances Now In Use In U.S. Homes

NEW YORK CITY—Gas appliances in daily service in U. S. homes increased by nearly 3.5 million last year and now total more than 102 million, the American Gas Association estimates in a new analysis of the residential market.

These appliances are used by approximately 38 million residential gas customers, including nearly 29 million served by utility companies and about 9 million who use LP (liquefied petroleum) "bottled" gas in areas beyond the present reach of utility mains.

AGA reports that heating units of all types total nearly 40 million to account for the largest portion of the gas-fueled equipment currently in use. This total includes 10,500,000 central heating systems, 23,140,000 space heaters, and 6,230,000 floor and wall furnaces.

Homemakers in 48 states and the District of Columbia are using 32,975,000 gas ranges, 23,100,000 water heaters, 3,430,000 refrigerators, and 2,250,000 dryers. Gas incinerators in service total about 465,000.

PHCIB Brochure Urges Industry Employes To Talk Up Products, Services

CHICAGO—"Your Voice Can Brighten Your Future" sums up the objective of the second step in the Plumbing-Heating-Cooling Information Bureau's 1959 program to encourage industry employes to talk up the products and services this industry offers.

That's the name of a brochure available now at no cost to member companies of the PHCIB. The pamphlet is part of the PHCIB's Employe Participation Program.

SEND FOR REPRINTS

"SERVICE MAINTENANCE CONTRACTS AND AVERAGE CHARGES FOR SERVICE PARTS AND OPERATIONS."

Only 50¢ each.

For your copy, clip this ad and mail with name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

A new way of life...with
GAS air conditioning
The Arkla-Servel SUN VALLEY® gas air conditioner will mean a NEW WAY OF LIFE for THE ENTIRE FAMILY.
Actually CHANGES the living pattern . . . giving MANY BENEFITS
BETTER HEALTH
CLEANLINESS
INCREASED PROPERTY VALUE
and most important . . . BETTER FAMILY LIVING. Install a SUN VALLEY gas air conditioner for COMFORT . . . and ECONOMY.
FOR FURTHER INFORMATION ABOUT GAS AIR CONDITIONING, SEE YOUR LOCAL GAS COMPANY OR WRITE
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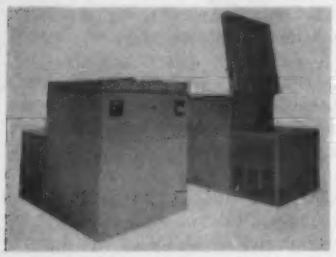
DEPT. V, SHANNON BUILDING, LITTLE ROCK, ARKANSAS
ALSO ASK TO SEE THE NEW SENTRY GASLITE
Gaslite BY ARKLA
BIGGEST NAME IN DECORATIVE OUTDOOR LIGHTING

Webber Offers Refrigerated Water Quench Tank



● A self-contained, refrigerated water quench tank with sufficient mechanical refrigeration capacity to lower the temperature of 50 lbs. of aluminum components or rivets from 1,000° to 34° F. in 90 seconds has been developed by Webber Corp., Dept. AH&RN, P.O. Box 217, Indianapolis, it has been announced recently.

The unit, model WE-50+34 has an air lift, top opening lid. Inside tank dimensions are 37 in. diameter, 57 in. high. Outside cabinet dimensions require 48 in. by 48 in. floor space.

Sufficient agitation is maintained to achieve zero stratification throughout the sweet water bath. A safety device prevents freezing, it was noted.

A similar unit, Webber model WE-50+28S, is designed for use as an alcohol quench tank. This unit has sufficient mechanical refrigeration to lower the temperature of 50 lbs. of aluminum components or rivets from 34° to 28° F. in 90 seconds.

Both units maintain a temperature accuracy of plus or minus 1° F.

Want More Details?

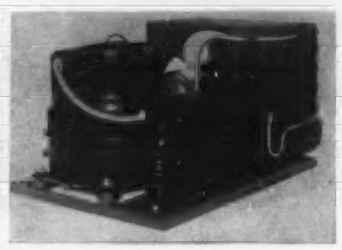
ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.

Tell him: "AH&RN sent me!"

Electronic Air Cleaners Offer 3-Stage Filtering

● The Electronic Div. of Mamco Corp., Dept. AH&RN, Racine, Wis. has introduced a line of "Health-Air" electronic air cleaners incorporating a three-stage filtering system.

The first stage mechanical element eliminates large airborne particles plus various germs, bacteria, pollen, mold spores, and mildew. The second stage electrostatic filter eliminates dust and other particles down to .01 microns. The third element of activated charcoal removes all remaining gases, smokes, and odors.



R-12 Condensing Units Feature Single Fan

● Two 1-hp., R-12 condensing units which "feature a single fan construction with capacities comparable to those obtained with units of the twin fan construction," were announced by the Evansville Div., Bendix-Westinghouse Automotive Air Brake Co., Dept. AH&RN, 950 East Virginia St., Evansville 11, Ind.

The single fan construction provides a compact unit for manufacturers with limited mounting space available in their fixtures, the company said. The over-all height of the single fan unit remains the same as the twin fan unit while width and length are reduced materially.

The new condensing units, designated models BRL100T and BRH-100T, feature twin-cylinder motor compressors designed to operate on 230-volt, single-phase or 208/220-volt, three-phase current.

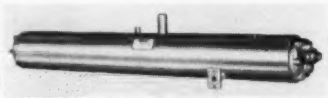
Adds New Series Lo-Boy Winter Weathermakers

● Addition of a new series of "Lo-Boy Winter Weathermakers" to its residential line of furnaces, featuring easy adaptability to summer cooling and a ceramic coated heat exchanger, has been announced by Carrier Corp., Dept. AH&RN, Syracuse 1, N. Y.

The "Stratosteel" heat exchanger used in the new models is coated with a combination metal and ceramic material to withstand high temperature. This is the same "Alcermet" coating which protects jet engine parts from high heat and direct flame, Carrier pointed out.

The new Lo-Boys are designed for basement or utility room installation where headroom is at a premium. Like the new upflow and downflow Weathermakers, a matching cooling coil and refrigeration section can be added at any time for summer air conditioning. Temperature is maintained by the Carrier control center which regulates cooling or heating "at the flick of a switch."

The new series includes six sizes with inputs ranging from 75,000 to 200,000 B.t.u. They will be available for all gases.



Heat-X Condensers Offer Simple Cleaning

● Heat-X, Inc., a subsidiary of Dunham-Bush, Inc., Dept. AHRN, West Hartford, Conn., has developed "CSTC" cleanable shell and tube condensers in sizes of 5 through 100 tons.

The heavy-duty, high-capacity condensers are specifically designed to simplify mechanical cleaning in areas where poor water conditions exist.

Rigidity of the internal condenser is assured by combining five tubes to a "bank." These banks are securely bracketed internally to provide a rigid, vibration-free tube arrangement.

"Corrosion." By Frank J. Versagi—50¢ each.

Get your copy Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

These 3 men
set up this tower in 2 hours

A Binks 3B4 cooling tower goes up in just 6 man-hours. Troublesome fabrication and fitting details are eliminated for you at the factory so you can figure job-site erection costs almost to the penny.

Once your tower foundation is in place, erection goes like clockwork. The blower, supporting frame, V-belt drive and motor and water basin are shipped sub-assembled. Tower casing, decking, drift eliminator, water distributing headers and gasketing materials arrive knocked down.

Quality you can recommend

Binks 3-B cooling towers are designed and built to give exceptionally quiet, trouble-free service year after year. Call-backs are few and maintenance is low.

A tower for every requirement

Whether you need a single tower with a 6-ton capacity or a multiple tower package up to 330 tons, you will find exactly what you need in the Binks 3-B series.

Send for free bulletins

See for yourself the many advantages which Binks cooling towers have to offer . . . in selection, in erection economy, in trouble-free service. Ask your Binks Branch Office for a copy of Bulletin 477-A and 333. Or, write direct. No obligation.

9152

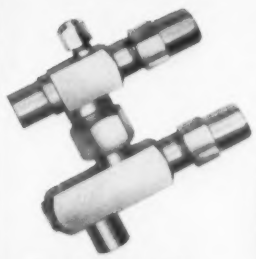
Binks *EVERYTHING FOR WATER COOLING*

A COMPLETE LINE OF NATURAL DRAFT AND MECHANICAL DRAFT COOLING TOWERS AND INDUSTRIAL SPRAY NOZZLES

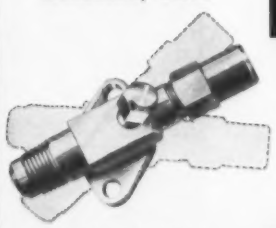
Binks Manufacturing Company

3116-38 Carroll Ave., Chicago 12, Ill.

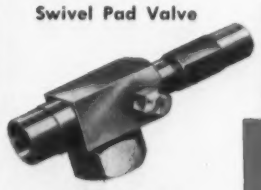
REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY



Break-Away Valve



Swivel Pad Valve



Rotalock Valve

PRIMORE

America's Outstanding

REFRIGERATION VALVES

Primore leads the industry with a full line of Steel Shut Off Valves.

Over *15 years* Research, Designing and Manufacturing experience of *top quality* Steel Valves.

FIRST with Break-away Valves;
FIRST with Swivel Pad Valves;
FIRST with Rotalock Valves!

THERE IS NO SUBSTITUTE FOR EXPERIENCE!

Furnace brazed flexible construction reduces cost. Your ENGINEERING, PURCHASING and PRODUCTION benefit!

Primore Sales, Inc.

2460 South Main Street
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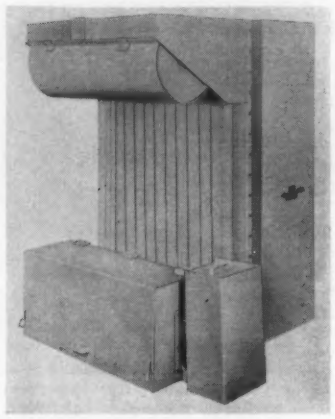


Schaefer Cases Feature Wide Top Opening

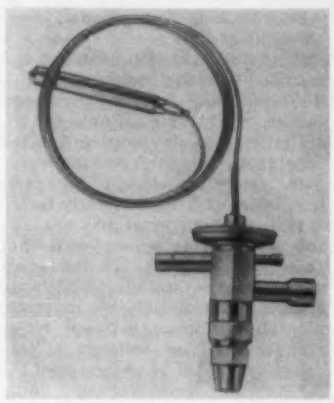
● An all new series 2000 gravity operated, self-contained multi-unit frozen food and ice cream merchandising cabinets with wide top opening was introduced recently by Schaefer, Inc., Dept. AH&RN, 801 Washington Ave., N., Minneapolis 1.

Because positive gravity operation is employed, there are no evaporator fans or blowers and no complicated mechanisms, the company said.

A special over-size Schaefer finned self-defrost coil, operated by an electric defrost timer, "keeps a blanket of cold air over the packages at all times," it was pointed out. "Because this coil has a definite affinity for moisture, the packages are kept frost-free and attractive.

"The defrost drain is kept free of ice by an electric heater attached to the drain. The high location of this drain prevents clogging."

TX Valve Offered for Heat Pump Applications



● A heavy-duty thermostatic expansion valve said to assure smooth performance and accurate modulation and eliminate valve "hunting" has been designed specifically for heat pump applications by the Heating & Air Conditioning Controls Div., Controls Co. of America, Dept. AH&RN, 2450 N. 32nd St., Milwaukee.

The model 214 heat pump valve is available for Refrigerant-12 or 22 with either standard liquid charged or pressure limiting charged power elements. Capacity ranges for the valve in Refrigerant-12 systems are 1, 2, and 3 tons; in systems using Refrigerant-22, it has 2, 3, and 5-ton ratings. The valve is available with either adjustable or non-adjustable (factory set) superheat, according to the firm.

The valve features solder-type inlet and outlet connections. Inlets are standard in ⅜, ½, and ⅝-in. o.d. solder; outlets are ⅝, ⅞, and 1⅛-in. o.d. solder. Standard external equalizer connection is ¼-in. o.d. solder with a ¼-in. SAE male flare connection available.

More details on the products described on this page may be obtained by writing the manufacturer at the address given in each story.

American Air Filter Offers New 'Rollotron'

● A new "Rollotron," combining the high efficiency of an electronic precipitator with the low maintenance of an automatic, renewable media filter, has been introduced by American Air Filter Co., Inc., Dept. AH&RN, 215 Central Ave., Louisville 8, Ky.

In the type B Rollotron, dry, electrostatically charged plates are used to agglomerate atmospheric contaminates—such as dirt, bacteria, pollen, smoke, etc.

The agglomerated particles (including submicron sizes) are held together by intermolecular attraction until they are picked up by the air stream and deposited in the renewable media of the storage section. There the accumulated dirt is automatically wound into a compact roll for easy disposal, it is noted.

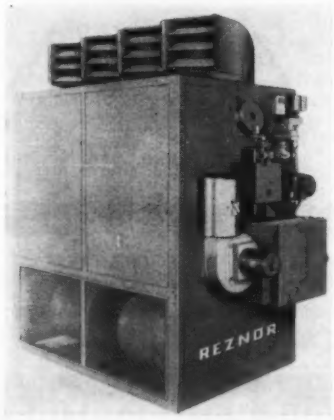
In the Rollotron resistance to air flow is uniform and constant and filter performance is always at optimum level regardless of job conditions, the company claims.

Insto-Gas Introduces Portable Heater Line

● A silver anniversary portable heater line has been announced by Insto-Gas Corp., Dept. AH&RN, 998 E. Woodbridge Ave., Detroit 7.

The line consists of nine models of three different types of heaters "to provide an LP-gas heater for every portable use and in a wide price range." The line features salamanders, infrared heaters, and improved Nos. 1700B and 1710B blower heater models.

The units are recommended for all construction work and industrial plants—"wherever portable heat is needed inside or outside."



Reznor Heater Has Advanced Burner Design

● Advanced burner design and substantially lighter weight are among announced innovations in the completely redesigned line of heavy-duty forced-air heaters now being produced by Reznor Mfg. Co., Dept. AH&RN, Mercer, Pa., it has been announced.

The new line, designated Series S, includes 10 sizes ranging in capacity from 400,000 to 2,000,000 B.t.u./hr. All sizes are available for gas, oil, or dual-fuel firing and for up-flow, down-flow, or horizontal installation.

"These heaters may be used in a duct system or with a discharge plenum with interchangeable louvered outlets which provide complete flexibility in the selection of the air distribution pattern," the announcement said. "Reznor's exclusive burner assembly includes a ceramic-lined burner block, a special burner ring with integral air guide vanes, and a simple electric ignition unit."

Shipping weights on the new units range from 200 to 1,500 lbs. less than on the previous design, it was stated.

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A line of heat transfer tubing made by Readi-Fin Mfg. Co., Inc. (a subsidiary of Reading Tube Corp., at Reading, Pa.). The extended surface is extruded from the tube wall, thus eliminating the possibility of fin failures resulting from thermal shock, corrosion and erosion. This "one-piece" (integral) construction provides maximum heat transfer efficiency, ruggedness, easy fabrication and freedom from fouling. It's available in Water Tube types with finned or plain ends and in Condenser Tube types with finned, plain or stripped ends.
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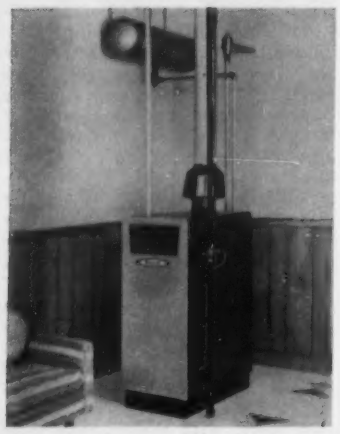
Packaged Boiler Has All Controls In Jacket



● A new, compact package gas-fired boiler has been announced by the Home Products Div., Rheem Mfg. Co., Dept. AH&RN, 7600 South Kedzie Ave., Chicago 29.

The unit has all controls and circulating pump mounted, wired, and enclosed in an attractive jacket, ready and suitable for installation in a playroom or finished basement, according to Rheem.

"Of wet-base design, the cast-iron boiler is hydrostatically tested —both the individual sections and the assembled boiler—with hot (150° F.) water at 75 lbs. pressure," it was stated. "Foil-faced spun glass insulation, 1½ in. thick, fills all air space between boiler and jacket. Flue collector is porcelain enameled 16-gauge steel.

"Sizes of these package units, in IBR-rated output, are 46,500, 69,000, 91,500, and 113,300 B.t.u.; knock-down units are available in seven sizes from 46,500 up to 180,000 B.t.u. IBR rating," the announcement said.

Table Top Refrigerator Has 5 Cu. Ft. Storage

● Designed for home or commercial installations — "wherever space is at a premium"—is a new table-top refrigerator manufactured by Glascock Bros. Mfg. Co., Dept. AH&RN, Muncie, Ind.

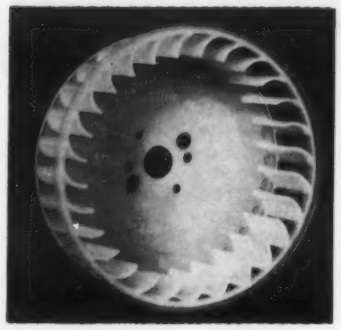
The "Glasco" refrigerator can be installed under-the-counter, built-in, or made mobile with casters. It features 5 cu. ft. of cold storage space with three removable shelves and new, larger freezing space for 126 ice cubes or 20 lbs. of foods.

One of its accessories is the select maple work top, complete with a 115-230 volt receptacle in the splashboard.

This refrigerator matches standard kitchen cabinets, sinks, and ranges in height and depth. Its specially hinged door permits placing against other appliances.

Over-all dimensions are: 27 in. wide, 24½ in. deep, and 34½ in. high (with adjustable gliders).

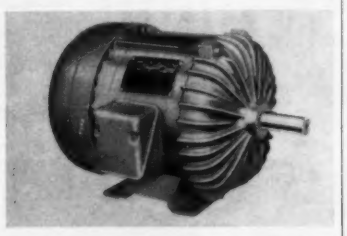
Nylon Blower Wheels Handle Small Jobs



● A new series of four nylon blower wheels has been developed by The Torrington Mfg. Co., Dept. AH&RN, Torrington, Conn., "for both low cost and high performance in refrigerators, movie projectors, and other small air-moving appliances."

Also light in weight and non-corrosive, the GA series plastic blower wheels are designed for installation in standard proportioned housings with unit-bearing mounting, it was stated.

According to tests in Torrington's Engineering Laboratory, the new blower wheel "has extremely high performance for its size range, diameters from 2 to 3 in."



1-Phase Motor Built In Explosion Proof Frame

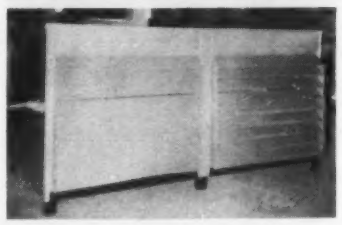
● Introduction of a new line of single-phase motors in totally-enclosed fan-cooled and Underwriters' approved explosion-proof frames has been announced by the Motor Div., Robbins & Myers, Inc., Dept. AH&RN, Springfield, Ohio.

Available in two, four, and six-pole speeds, the new motors are built in re-rated NEMA frames 182, 184, 213, and 215. Ratings range from ¾ to 5 hp.

Robbins & Myers also has expanded its line of open-protected single-phase motors to 20 hp.

Forston Adds 15-Ton Remote Heat Pump

● New 15-ton air-cooled remote heat pumps are featured in the 1959 line of year-round air conditioning offered by The Forston Co., Dept. AH&RN, 1400 Conti St., Houston 2, Texas.



Deluxe summer-winter controls, "proven performance" automatic defrost controls and reversing valves, the use of only one (Brunner) compressor, and simplicity of design for easy installation and servicing are some of the features of new model 1500R, according to the company.

Also included in the Forston line are new 2, 3, and 5-ton package models to supplement the 2, 3, 5, 7½, 10, and 15-ton split-system central units for residential and commercial use, according to the announcement.

All models are of the air-to-air type and all are furnished in either heat pump or cooling only type.

Forston's 1959 line also includes automotive air conditioners (dash and trunk mounting) for all popular makes and models of standard American-made cars, plus a newly-designed model ("Continental Voyager") exclusively for the small foreign and domestic cars with limited horsepower engines, the announcement said.

Claude E. Forston commented that the company's volume of business on heat pumps has increased "to the extent that we are having to provide additional facilities for production, and at this time are in the process of building a new factory-warehouse-office building."

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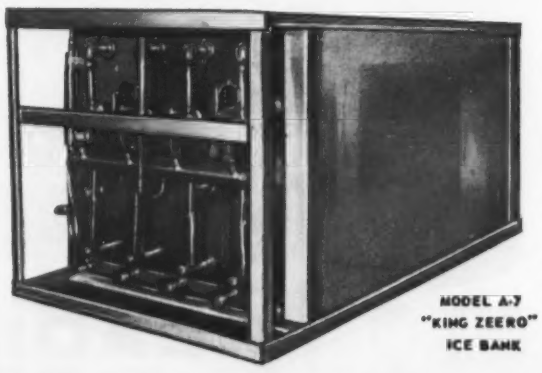
The "King Zeero" ICE BANK is designed to deliver 32° to 34°F. ice water for recirculation through air cooling coils in exactly the right amount when and where it is needed. It levels off "peak" and "valley" loads. Peak loads many times compressor capacity are easily handled. Ice Banks may be added to increase existing capacity. Refrigerant: Freon, Methyl Chloride or Ammonia.



MODEL A-7 "KING ZEERO" ICE BANK

The Patented Coils with Built-in Louvres opposed to the flow of water through the ICE BANK provide turbulence. This eliminates a mechanical agitator - insures all the water rubbing all of the ice. No upkeep or repair expense whatever.

The "King Zeero" Ice Storage System of water chilling has definite advantages over direct expansion, or other types of ice accumulators.

Saves power through smaller compressor requirement. Simple construction (no moving parts). Dependable in performance. Low operating and costs.

Let the ice stored during light loads take care of peak loads. The compressor need only handle the average daily load - not the peak.

CAPACITIES - 500 lbs. to 30,000 lbs. (72,000 B.T.U.'s to 4,320,000 B.T.U.'s) in a single unit. Multiple units may be installed.

THE KING ZEERO COMPANY
4300-14 W. Montrose Ave. - Chicago 41, Ill.
Manufacturers of Ice Builders - Ice Builder Cabinets - Ice Banks

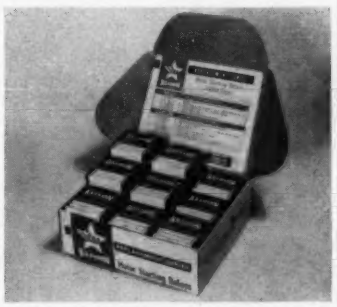
Climatic Cooler Line Fits Nearly All Cars

● A five model 1959 line of automobile air conditioners has been introduced by Climatic Air Sales, Inc., Dept. AH&RN, 3030 Canton St., Dallas 26.

The "Imperial," "Royal," "Custom," "Climatrol" (trunk unit), and "Hot & Cold" units "are in a price range for every customer," the company said.

Each unit has an electro-magnetic clutch and a thermostat. A combination of squirrel cage twin blowers or twin fans is offered for the consumer's preference.

Climatic Air is made to fit almost every make and model of domestic automobile and adapters are available for most foreign cars, it was stated.



Klixon Replacement Kits Hold 9 Relays

● Availability of Klixon motor starting relay replacement kits, called, "The Star Series," through more than 50 authorized refrigeration parts and electric motor service parts distributors in the United States and Canada, has been announced by Spencer Div., Metals & Controls Corp., Dept. AH&RN, Attleboro, Mass.

Each of the compact Star Series kits contains nine Klixon motor starting relays. These nine relays can handle any 115 volt, 1/12 to 1/2 hp. domestic refrigeration relay replacement, the company said. With accessories in each kit, the nine relays can replace 159 different relay ratings.

Cross-reference charts (horsepower to Klixon relay number) are printed on each kit cover.

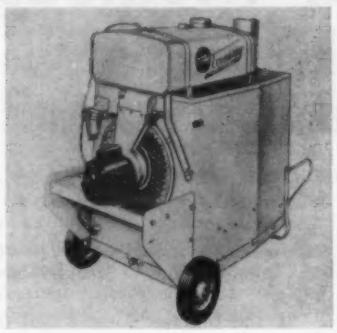
Plastic Mastic Fixes Industrial Machinery

● Numerous industrial repair jobs reportedly can be handled with a new epoxy-polyamide chemical compound, "Plastic Mastic," which is being marketed through industrial distributors by Williamson Adhesives, Inc., Dept. AH&RN, 8220 Kimball Ave., Skokie, Ill.

Plastic Mastic is claimed to be practical and economical for such uses as repairing machinery, fixtures, tanks, pipes, and plumbing, and for filling leaks and cracks.

The Plastic Mastic-General Repair Kit is supplied in quart, half-gallon, and two-gallon sizes. Each kit consists of two cans of equal size; one can contains the white base, the other the black hardener.

Economy Heater Back In Herman Nelson Line



● Reinstatement of the "Economy" model to the 1959 line of Herman Nelson portable air heaters has been announced by American Air Filter Co., Inc., Dept. AH&RN (PD), 215 Central Ave., Louisville 8, Ky.

The Economy heater has been re-engineered for intermediate capacity and to provide approximately 40% greater heat capacity, up to 270,000 B.t.u. per hour, according to AAF. It operates on either gasoline or fuel oil—with no adjustments necessary.

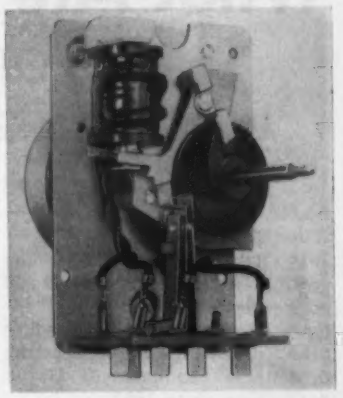
Canvass ducts direct the heat to the proper working areas. Combustion fumes are vented away. Simple controls and quiet operation also are improvements to the new unit, it was stated.

Fabri-Kut Filter Trims To Fit Window Units

●"Fabri-Kut" is the new "trim-it-yourself" air filter being offered by American Rock Wool Corp., Dept. AH&RN, 20 N. Wacker Dr., Chicago 6, Ill., maker of the "Dustgard" line of glass fiber air filters.

Packaged in plastic bags, Fabri-Kut can be trimmed by the user to fit most sizes of window air conditioners, according to the company. It will be available through authorized Dustgard wholesale distributors.

Paragon Control Defrosts Outside Coil



● Outside coils of heat pump units can be accurately and inexpensively defrosted with the Paragon 230 Series control, according to Paragon Electric Co., Dept. AH&RN, Two Rivers, Wis., in a recent announcement.

The 230 Series controls now available to heat pump manufacturers are compact and are designed for simple mounting, the company said, adding: "The complete control movement is safely enclosed in a molded non-metal (plastic) housing for maximum protection from weather variations."

The timing combinations available are flexible enough, according to Paragon, for application on reverse cycle window units for stationary type heat pumps. The load circuit can be opened or closed for the defrost cycle to meet demands of a wide variety of control circuits.

Timing frequency and defrost cycle length can usually be tailored to customer specifications, it is noted.

A remote control termination feature can be added, according to the firm.

More details on the products described on this page may be obtained by writing the manufacturer at the address given in each story.

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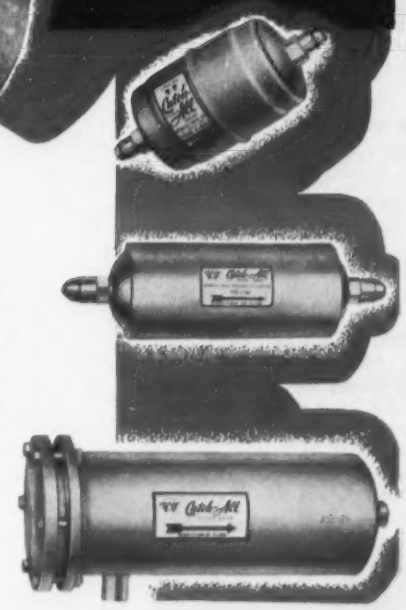

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Our 25th Anniversary...1934-1959

What Are the 'Special' Methods

Of a Successful Dealer?

Moran & Co., With 75% of Volume in Residential, Does All Installation Work; Cultivates Builders and Users

By C. Dale Mericle

BLOOMFIELD, N. J. — "It's getting easier every year to sell residential air conditioning," believes Michael T. Moran, who's been operating a contracting firm under the name of Moran & Co. here since 1951.

"In fact, we're doing almost as much residential air conditioning now (February) as in summer; at least, we're putting in the coil enclosures although we have to wait until the ground settles before we can install the slabs and condensing units," he discloses.

Although the company does a certain amount of commercial air conditioning and refrigeration work, 75% of its volume comes from the residential air conditioning and heating field, mostly in the custom-built new home market, Moran indicates.

"I feel residential has the biggest potential," Moran also says. "Saturation is very low, and I'm certain we can sell as much tonnage in residential at a good markup as we can in commercial, especially the bid and spec jobs.

Filters & Humidity Control

"We also find increasing interest on the part of the public in electrostatic air filters and positive humidity control," he adds. "Doctors are recommending improved humidity control, especially for people with sinus trouble, for example," Moran has found.

An engineering graduate from the University of Pennsylvania, Moran joined General Electric Co. in Bloomfield in 1941 and became a sales engineer. It was not surprising, therefore, that when he went into business for himself 10 years later, he took on the G-E franchise, being thoroughly familiar with the line.

Makeup of Labor Force

His firm has developed to the point where it now employs 20 people, operates its own sheet metal shop, has four refrigeration mechanics who handle both installation and service, and maintains an electrician on its staff.

"At first," Moran explains, "we did sublet our electrical work but found we usually had to lead the electricians by the hand. With our own electrician jobs go in much faster.

Does Some Outside Wiring

"When builders found we were using our own electrician, they started giving us the entire house wiring job as well," he adds.

A number of straight house wiring jobs are done by the company every year, but these are not actively solicited.

"Mostly, our wiring is done on jobs where we're also doing the heating and/or air conditioning," Moran explains.

The company has about 25 builder accounts, and the great majority of its jobs is in custom-built homes.

"One builder, for example, always has us air condition his model homes, and then his salesmen promote and try to sell air conditioning," says Moran. "About 60% of all the homes he builds are air conditioned.

Builder Salesmen Incentive

"We give builders firm prices on air conditioning, and then the builder adds a slight markup. This gives the builder's salesmen an incentive to push air conditioning," Moran believes.

"If the builder doesn't sell a customer on having air conditioning in his new home, we get the builder's permission to talk directly to the customer. While we naturally try to sell him on air conditioning, we at least try to sell him on having us install a coil enclosure in the ductwork so we can easily add cooling later," Moran says.

Regardless of whether air conditioning goes into these custom-built homes or not, Moran & Co. sizes the ducts and grilles for air conditioning.

"We keep a list of all the homes where we install the heating system, because we know there are a lot of people who would like to buy air conditioning but feel they can't afford it when they first move into their new homes," Moran explains.

Callbacks on Heating Users With Year-Round Ductwork

"They like knowing, however, that the duct system is ready for air conditioning. We check with these people every year ahead of the regular season in hopes they may now be ready for the air conditioning installation. Also," says Moran, "we make a slight price concession for out-of-season installations.

"Generally," he explains, "our prices run higher than those of competitors, but we give prospects a list of our satisfied customers, emphasizing especially those jobs that never did work right until we were called in to fix them.

"We're competitive, of course, but if we can't make our normal profit on a job, we don't want it," Moran declares.

"One of our best selling features," he says, "is good service, but contractors should remember that a lot of unnecessary service can be prevented if the job is installed originally in accordance with good air conditioning and refrigeration practice.

"We have very few callbacks, except for those customers who forget to change dirty filters."

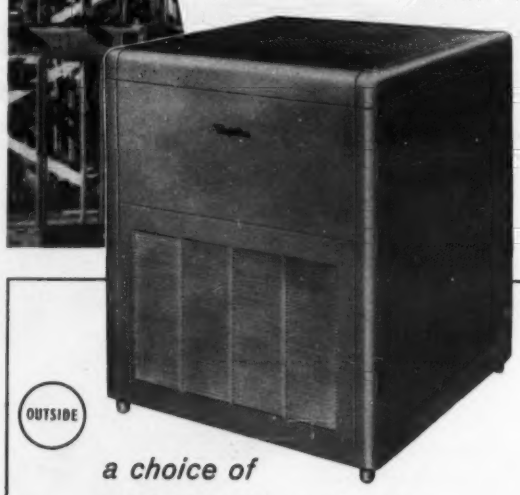
Policy on 'Free' Service

The firm normally gives one year "free" service, and to cover these costs sets up a service

In the Residential and Commercial Fields

Perfection® AIR CONDITIONERS

grab a giant chunk of this growing market with a line that's planned, priced and produced to sell it!



OUTSIDE

a choice of 3 air-cooled condensers

NEW REMOTE CENTRAL SYSTEMS

INSIDE

standard components make installations easy

THREE CAPACITIES of 2, 3 and 5 tons satisfy most all residential and small commercial requirements. While the 3 and 5-ton condensers are used with the components at the right, the 2-ton unit is furnished as a complete package, including thermostat, 25 feet of charged tubing, and its own evaporator coil for location in either vertical or horizontal ducts. All three are efficiently cooled by air. No piping or drain problems; no cooling towers.

YOU SAVE on installation because controls are included ready for simple hookup. (Both 3 and 5-ton units include process valves, sight glass, and liquid receiver.) Your customer saves too. Low operating costs result from Perfection's perfect balance of all components, providing more actual BTU's of cooling per watt of electricity than any comparable unit on the market today!

UPFLOW CIRCULATION exhausts warm air out the top, preventing damage to nearby grass and plant life. It's safer too. Condenser coils on top protect fan from falling debris, keep careless fingers out.

RUGGED, compact condenser cabinets are made from tough, rust proofed furniture steel that's approved for year-round outdoor service in severest climates. Weatherproof condenser coils are all copper with aluminum fins.

IN UPFLOW FURNACE, Perfection's patented new Flex-A-Coils are built on a telescoping frame that adjust easily to fit the plenum chamber above any upflow furnace. You save head room and permit duct to run in either direction. Only two sizes (3 and 5-ton) are needed to satisfy most jobs.

IN COUNTERFLOW FURNACE, Perfection's flat coils fit neatly beneath the furnace. Ideal for perimeter heating systems where blower capacity is sufficient for cooling. Coils are all copper with aluminum fins and furnished in both 3 and 5-ton capacities.

IN HORIZONTAL DUCT, these easily installed horizontal coils are mounted in a rust-proofed steel casing that fits flush with duct walls. Fittings are all included to simplify suction, liquid, and drain connections.

WITH AUXILIARY BLOWER in horizontal duct where furnace blower capacity is inadequate for cooling, this compact, belt-driven blower installs flush with the duct and combines neatly with Perfection's matching horizontal coil. Two sizes include 3 and 5-ton capacities.

A PERFECTION VERTICAL AIR HANDLER is also available. In this attractive, vertical cabinet, Perfection combines both blower and coil unit for residential and commercial applications. To tie in with existing systems, only a short duct run and bypass damper are needed.

reserve that averages about 3%.

As for the type of systems being installed, Moran indicates he's pushing zoned jobs, especially for split-level homes.

"Where the recreation room is on slab or crawl space, we're advising builders to put insulation around the edges and a vinyl vapor barrier on the ground. Then we install solid ducts around the perimeter.

Special Zone, Time Controls

"On larger homes we have occasionally installed two furnaces," Moran says, "one for the living area and one for the sleeping area. For this type of job we use two coils and one large condensing unit.

"Instead of two furnaces and cooling coils we sometimes use zone control dampers operated off separate thermostats," he explains.

"We also promoted time control devices so that different temperatures can be automatically maintained in living and sleeping quarters during the day and night," Moran adds.

Henry F. Vogt Dies

MILWAUKEE — Henry F. Vogt, 79, active board member and a former officer of Cutler-Hammer Inc. here, died unexpectedly in St. Petersburg, Fla., Feb. 16 after a heart attack.

Vogt started with Cutler-Hammer in 1900 as a timekeeper and advanced through various accounting and financial positions prior to being named treasurer of the electrical firm in 1928. He was given the additional title of vice president in 1931 and became chairman of the executive committee in 1945.

He was chairman of the board from 1949 until 1955.

For Dealer and Homeowner

Title I FHA Loan 'One of Best Ways' To Finance Central Cooling In Existing Homes

WASHINGTON, D. C. — Title I FHA-insured loans have been termed "one of the best vehicles available for both the dealer and the homeowner" in financing the sale of central residential air conditioning in existing homes, by Roy F. Cooke, assistant commissioner of the FHA.

A central summer cooling system is eligible for Title I financing; the window-type room air conditioner which is not attached permanently to the property does not qualify.

"The simplicity of Title I financing should be most attractive and appealing for dealers selling permanently installed cooling systems because it amounts to a cash sale, eliminating bank loans for operating expenses, recourse on notes, and collection problems," Cooke states. He lists the following other favorable factors in such loans:

Low interest rate—$5 discount—and no added finance charges.

Dealer obtains his sales price in full from the bank six days after the completion of the job, and without recourse.

Payments are made in monthly instalments to the bank over a period up to 60 months on amounts up to $3,500 maximum.

These are some examples of the cost (per month) of Title I loans to a borrower on a 5-year loan.

Amt. Loan	Monthly Payment
$ 800	$16.63
1,000	20.79
2,000	41.57

There are some 12,800 institutions lending money who have been approved to make the Title I loans which the FHA insures. Cooke suggests that air conditioning dealers contact one of these approved institutions in the dealer's area of operation, and get approval by the bank as a business organization with which the bank will deal on Title I loans.

In order to qualify for a Title I loan, the individual making the home improvement must own, or be in the process of purchasing, the property he wishes to improve, or he must hold it under a lease expiring not less than 6 months after the maturity date of the loan.

He must also have a good credit record and a regular income that will enable him to make the payments on the loan without undue hardship.

In a recent talk before an instalment lenders association, Cooke made these comments about Title I loans, and instalment loans generally:

"There are over 50 million homes in this nation with more than 1 million new ones being built each year. This presents an inexhaustible market for home improvement loans because people always want improvements—additions, alterations, decorations, air conditioning—whether a house is one or 50 years old. It should be remembered that 'A home is only as modern as the last improvement.'

"A recent Federal Reserve Board survey showed that 50% of all families have no instalment credit obligation. Also, it showed that of families with annual incomes from $3,000 to $7,500 per year, only 40% used consumer credit, which leaves a 60% market to be developed.

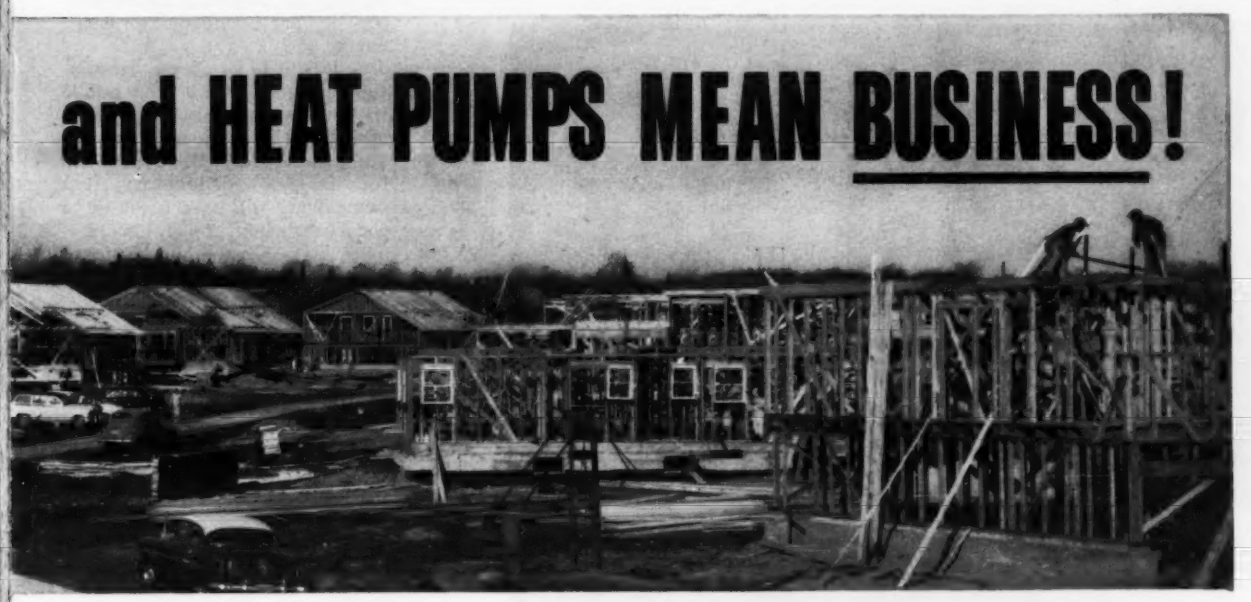
"The average amount of a Title I loan is currently near $1,000, showing that the improvements being made with these loans are of a fairly substantial nature."

Hudik-Ross Expands

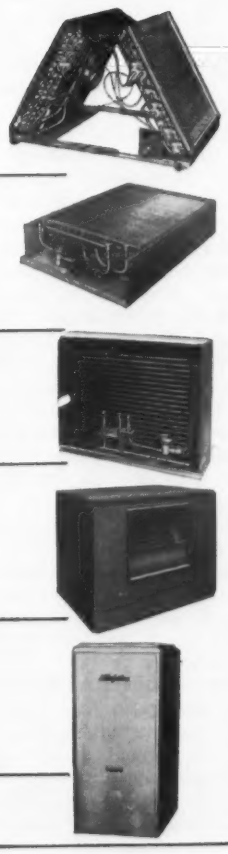
NEW YORK CITY — In its second major expansion move in less than a year, Hudik-Ross, Inc., New York and New Jersey mechanical contracting firm, has leased new quarters for its New York office at 321 W. 44th St.

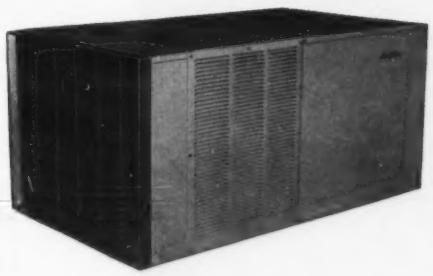
The move triples the amount of space now occupied by the company in the city, according to Frank Hudik, president.

Eight months ago, the firm purchased a building which more than tripled its office and shop facilities in New Jersey.



FIT ANY JOB





NEW AIR-COOLED HEAT PUMPS AND AIR CONDITIONERS ARE EFFICIENT, VERSATILE

TUCKAWAY HEAT PUMPS

Completely automatic, air-cooled, and electrically powered, the new self-contained Tuckaway heat pump (in 2, 3, and 5-ton sizes) is ideal for residential and small commercial use. Its compact design permits a variety of mountings and adds new flexibility to central-system installations, either tied in with existing duct runs or with a special supply chamber over the blower end for use without ductwork. Thanks to engineering advances, the new Tuckaway is performing with outstanding success in applications that until now seemed impossible!

TUCKAWAY AIR-CONDITIONERS

Efficiently air-cooled, Perfection's new Tuckaway provides the comforts of central-system air-conditioning without expensive plumbing. These compact, self-contained units can be suspended from ceilings, or tucked away in attic, basement, transom or crawl space. Offered in 2, 3 and 5-ton capacities.

REMOTE HEAT PUMPS

Air-cooled. Quiet blower-coil is installed indoors, requires no floor space. Compressor section located outdoors gives complete flexibility of installation. Fully automatic operation, with top cooling and heating efficiency in a wide range of conditions and sizes from 3 H.P.

FREON! Perfection now makes Freon refrigerant in 10, 15, or 25-lb. sizes available to dealers on direct purchase through local distributors. For full details, see your Perfection distributor.

Be a PERFECTIONist this year.

FOR COMPLETE INFORMATION ON PERFECTION AIR CONDITIONING, ATTACH THIS COUPON TO YOUR LETTERHEAD AND MAIL TO PERFECTION INDUSTRIES.

Name_____

Firm _____

Street Address_____

City_____ State_____

THE FORWARD TREND IN HOME COMFORT

Perfection®

INDUSTRIES, DIVISION OF

HUPP Corporation 1135 Ivanhoe Rd. Cleveland 10, Ohio

Cooling, Commercial Refrigeration Distributor Sales Up 2% During '58

WASHINGTON, D. C. — Air conditioning and commercial refrigeration equipment distributors recorded an average 2% gain in sales in 1958 over the previous year, according to a wholesale trade report issued by the Bureau of the Census.

However, 1958 sales of plumbing and heating equipment and supplies distributors were off 4% from 1957.

Sales last year by all types of merchant wholesalers as a group averaged about 2% below 1957 sales, the Census Bureau said. Durable goods trades indicated a 6% decline from the previous year while non-durable goods trades noted a 1% increase.

December, 1958 sales of air conditioning and commercial refrigeration equipment distributors soared 33% over the same month of 1957 and were 4% ahead of November. End-of-December inventories gained 4% compared with a year ago and declined 4% compared with the end of November.

Sales of plumbing and heating distributors in December rose 4% from a year ago but dropped 11% compared with November. Inventories at the end of the month were up 5% from a year earlier and down 3% from Nov. 30.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Long Island Contractors, Union Join Forces To Promote Better Heating, Cooling Systems

ISLAND PARK, N. Y.—Some 30 Long Island air conditioning and heating contractors who comprise the Nassau & Suffolk (county) Sheet Metal & Roofers Association and members of Local 55 of the Sheet Metal Workers Union are engaged in a joint effort to raise standards of installation and service.

Adoption of a code of ethics has been announced by Dell Washburn, president of the contractors' group, and Joseph Frederick, head of Local 55.

This joint effort actually got under way about a year ago, according to Washburn, who explained that considerable time was required to work out legal problems involved in such a cooperative program between an employers' association and a union.

Public relations counsel has been engaged and is presently working primarily with architects and engineers. The group is now starting to aim at the general public, Washburn said.

Besides Washburn, association officers include Sam Messing, vice president, and Erwin Popkin, recording secretary and counsel.

Under the code of ethics, contractors are pledged to install warm air heating and air conditioning systems with sufficient capacity to provide indoor climate control of the space intended, and an optimum amount of air must be delivered without drafts and evenly distributed.

Equipment must be installed to permit adequate servicing, and all ductwork must be completed in a "permanent, neat, and workmanlike manner so as to insure long life and trouble-free operation."

Contractors also agree to guarantee their work for at least one year and to service all equipment throughout its life, to conform to all applicable building codes, fire-prevention regulations, and such nationally recognized standards as those of the National Warm Air Heating & Air Conditioning Association, the American Standards Association, and the American Society of Heating, Refrigerating & Air-Conditioning Engineers.

It is the hope of the association and union that the public will select contractors who subscribe to the code, and if an installation by a member contractor is not satisfactory, the homeowner will have recourse to the association and union.

TURN

TYPHOON

Flexibility of Typhoon units proves itself once again in this recent installation in a new super market. Four ceiling mounted air handling units totaling 40 tons were suspended from the ceiling to save valuable floor space. Working with compatible air cooled condensing units mounted on the roof, these Typhoon units will provide the ultimate in cooling and heating comfort all year round.

AND HAVE THE RIGHT EQUIPMENT, AT THE RIGHT PRICE, EVERY TIME!

Now you can fill every need, solve any problem with Typhoon's exclusive residential, commercial and industrial equipment! A full range of air cooled units from 2 tons to 20 tons, both packaged and as split systems. Water cooled units from 3 tons to 75 tons. Remote air cooled condensing units to 20 tons, water cooled to 75 tons. Gas and oil fired furnaces in horizontal, vertical upflow and counterflow types. And now, Typhoon's line of compact air-to-air heat pumps will open a new era in air conditioning for you. Each and every unit with built-in Power Reserve—a combination of superior components and oversize parts that insures dependable performance above rated capacity through all weather extremes. All copper condensers in water cooled units, largest coil surfaces and rugged 11 and 14 gauge metal cabinets. Find out how Typhoon quality and flexibility can add to your reputation for getting the job done better, faster, more economically—with more profit for you.

TYPHOON
DIVISION OF HUPP CORPORATION

Typhoon Air Conditioning Company, Division of Hupp Corporation
505 Carroll Street, Brooklyn 15, New York

☐ Have a representative call me for an appointment.

☐ Please send full product literature.

Name_____

Firm_____

Address_____

9C-1

Florida Exposition Features All-Electric Air Conditioning

TAMPA, Fla. — Year-round, all-electric air conditioning was in the spotlight at the 13th annual Florida Electrical Exposition at the Florida State Fair here.

Sponsored by Tampa Electric Co., area electric utility firm, this event opened Feb. 3 and ran through Feb. 14.

In addition to nine Typhoon "Prop-R-Temp" Heat Pumps (a total of 105 tons) located to cool or heat the Electrical building, there were eight individual displays of heat pumps.

These were: Advance Appliances, Inc. (Typhoon); Alert Refrigeration Co. (Deering); Joe M. Bowlby Co. (Typhoon and "Comfortaire"); E. E. Brammer Co., Inc. (General Air); Brandon's Heating & Cooling (Carrier); General Electric Co. ("Weathertron"); L & L Distributors (Philco); and Peerless Corp. (Peerless).

Several firms, also, displayed room air conditioning units. These were Byars-Forgy, Inc. (Frigidaire); General Electric Co.; Hotpoint Appliance Sales; Kelvinator Div. of American Motors Corp.; L & L Distributors (Philco); Traynor-Dean Appliances, Inc. (Gibson); and Electric Supply Co. ("RCA Whirlpool").

Two firms exhibited filters and other materials vital to air conditioning installations—Hadley Products Co., Inc., air conditioning filters, and Owens-Corning Fiberglas Co., filters and insulation materials.

Two firms, Edwin L. Wiegand Co. and Electrend Distributing Co., displayed radiant electric heating equipment; and, one firm, Waters Equipment Co., provided a display of "Scotsman" automatic, commercial ice making equipment.

2-In. Deep Trion Electronic Air Cleaner Takes Standard Filter Space

McKEES ROCKS, Pa. — An electronic air cleaner "no larger than an ordinary furnace filter" is currently being marketed by Trion, Inc.

Only 2 in. deep in the direction of air flow, the new model, called the Trion DFL, can, in most cases, be installed in the same area presently occupied by the standard disposable filter, the company said in its announcement.

The Trion DFL is claimed to remove particles from the air as small as 1/2,500,000 in. It is easily installed, requiring no special skill or tools, the company has claimed, adding that the unit's power requirement is the same as that of a 25-watt light bulb.

"Servicing the Trion DFL is almost as easy as changing mechanical filters," the announcement stated. "It has a disposable dirt collecting pad that can be readily removed and replaced by a new one. The Trion unit is equipped with a gauge that indicates when the dirt collecting pad should be changed.

"Under normal operating conditions the pads need not be changed more than three times per year. They may be cleaned by a vacuum sweeper to prolong usability. Two additional pads are included with each unit.

"The power pack is equipped with a 6-ft. power cable to permit remote control operation of the unit. Longer cables are available at slight additional cost.

"As is the case with the larger Trion models, the DFL has no moving parts.

"Its operating principle is that of electrostatic precipitation. As the dirty air enters the Trion it is electronically charged (positive). The electronically charged particles are then naturally attracted to grounded plates (negative) over which the air must pass, permitting only clean air to be recirculated into the house. It is of aluminum and plastic construction and the manufacturer claims an unlimited life span.

"The DFL Trion is available in a variety of sizes to fit all national make furnaces and has a capacity of 640 to 1,000 c.f.m. per panel.

"Where necessary the DFL panel can be easily installed in an adapter in the return air duct. It can also be used with central air conditioning or large room air conditioning units."

SMALL SIZE electronic air cleaner can be installed in area now occupied by standard disposable filter. Power pack permits remote control.

The DFL unit is designed for use in homes and small commercial establishments, according to Trion, Inc.

Survey Finds Many Chicago Architects Favor Separate Bids from Mech. Trades

CHICAGO—A recent survey of architectural offices in the Chicago area has shown that 71% are in favor of separate bids on plumbing, heating, ventilating, and electrical contracts.

This information was obtained from a questionnaire sent out by the Coordinating Committee of Mechanical Specialty Contractors Association of Chicago, which is composed of representatives of the Electrical Contractors Association of City of Chicago, Mechanical Contractors Chicago Association, Plumbing Contractors Association of Chicago, and Ventilating & Air Conditioning Contractors Association of Chicago.

These four associations represent a total of 413 individual contracting firms, it was stated.

"A total of 133 replies to the questionnaire were received, including all of the major architectural offices in the area," the survey report said. "The importance of the subject, not only to contractors but also to architects, is evidenced by the fact that 42% added significant comments in their replies, the majority of which were strongly favorable toward separation of all mechanical work from the general contract.

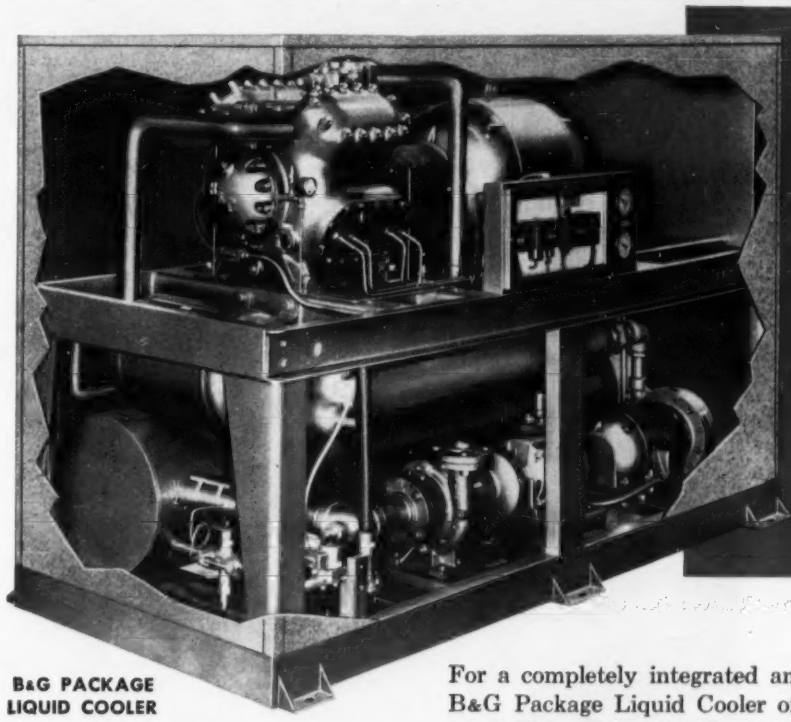
"In addition to stating preferences, each architect was asked to indicate the actual practice prevailing in his office. The results show that 36% of those polled take separate bids on all jobs, and another 40% take them on more than half of their jobs.

"The Coordinating Committee is actively promoting the cause of separate bids, not only to eliminate 'bid-shopping' and 'bid-peddling' but also to establish a more direct line of contact between the architect and the mechanical contractor; to give the architect a greater voice in the selection of mechanical contractors, and to reduce the overall cost of building projects."

Rutgers To Condition New Library for Coeds

NEW BRUNSWICK, N. J.—A $1,000,000, two-story library to be constructed for Douglass college, the women's division of Rutgers university, will be air conditioned.

Designed by Warner, Burns, Toan & Lunde, New York City architect, the building will have a seating capacity of 600 students and a book capacity of 150,000 volumes.

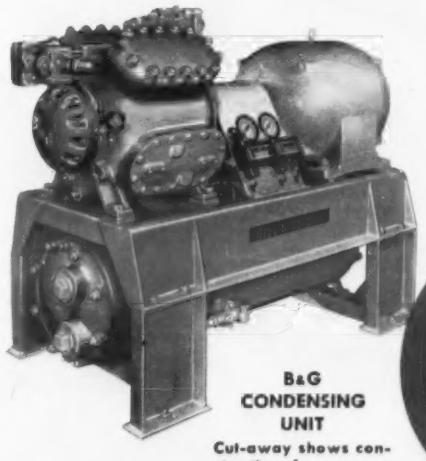


A WELL DESIGNED, COMPACT MACHINE WITH ALL MAJOR COMPONENTS COVERED BY ONE MANUFACTURER'S GUARANTEE!

B&G PACKAGE LIQUID COOLER

For a completely integrated and assembled water chiller, the B&G Package Liquid Cooler offers many outstanding advantages. It is equipped with B&G products throughout—the only unit of its kind *with all major components designed, built and guaranteed by one manufacturer!* This packaged unit eliminates many costs which might otherwise be charged against the job.

In capacities from 7½ through 150 tons, the matched components of the B&G Package Liquid Cooler give a complete capacity-engineered combination of chassis, motor, compressor and automatic control obtainable nowhere else. Everything included—no extras to buy.



B&G CONDENSING UNIT

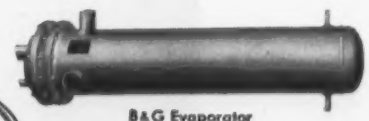
Cut-away shows construction of compressor

B&G CONDENSING UNIT

Here is another matched unit with all components manufactured and guaranteed by Bell & Gossett. It offers an impressive list of features, *many of them exclusive*, which make it completely outstanding. Amazingly compact as well as efficient—7½ through 150 tons.

A FULL LINE OF REFRIGERATION AND AIR CONDITIONING COMPONENTS

B&G Condenser



B&G Evaporator

B&G Motor Compressor

B&G Centrifugal Pumps

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BELL & GOSSETT COMPANY

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'Orderly' Approach To Selling Air Conditioning

Five Steps (Prospecting, Pre-Approach, Approach, Presentation, And Close) Explained As 'Path to Sale That Can Be Made'

In the accompanying article, William T. Rice, "Freon" Products Div., outlines an "orderly" approach to selling air conditioning. Material is from a talk which he has presented to various groups in the industry. The "main parts" of the "orderly" approach which he covers are:

Prospecting—Five methods.

Pre-approach—"Case the joint."

Approach—"You have two or three minutes to make a favorable impression."

Presentation—"Establish prospect's needs; sell benefits."

Close—Four methods. "When you get the order, get out."

"Selling has to be learned, practiced, and mastered like learning how to repair compressors, charge a unit, solder a pipe.

"What makes a good salesman is a complex problem which has been exhaustively studied by a great many organizations. There are good salesmen who have all sorts of tempers, talents, backgrounds, looks, etc.

"One thing, however, has been found to be common to most and that is they follow a careful outline or plan in making the sale. And because the same plan is almost universally followed by these successful men I think it would be well to learn it and follow it."

With this preamble, William T. Rice, "Freon" Products Div., du Pont Co., speaking before a group of air conditioning and refrigeration contractors and servicemen, offered an outline for an "orderly" approach to the selling of air conditioning equipment.

Selling Process Steps

"Each one of you will interpret and use it in your own way but if you follow the outline your chances of making a sale are greatly improved," Rice advised.

"The selling process consists of several well defined steps which lead ultimately to the sale or order. There are certain things to be considered all the way along. During the entire sale we are trying to establish a good friendly relationship with the prospect. We are trying to get him to like us, and have confidence in us, our product, and our company.

"We want him to believe that he is the most important person to us and if we were in his shoes we would do what we are asking him to do. We must be sincere. This will result from a thorough knowledge of our product and the prospect's needs. If we are not thoroughly convinced, the prospect never will be."

Rice then went on to offer the following specific recommendations (condensed, in part):

Locating, Qualifying Potential Customers

"The first step is called **prospecting.** This is the location and qualification of potential customers. There are many ways to go about this sorting job.

"The first is *cold canvassing* where we actually ring doorbells and contact people without knowing their needs, ability to pay, or other standards of a qualified prospect. Selective canvassing for certain products could be desirable. If you are selling residential air conditioning go to a part of town where all homes are over $25,000 and start ringing doorbells.

"The main disadvantage to cold canvassing is that expensive time could be wasted talking to completely uninterested prospects. The number of people contacted per day is smaller than other methods.

"The second method is called *endless chain prospecting.* This technique utilizes present customers and known prospects to provide names of other prospects who might be interested in your product or service.

"In commercial work this is a natural. Most store managers in the same line of retail products know quite well the names of most of their competitors.

"Ask present owners for friends who might be prospects. It is helpful to ask the man who is giving you these names if he would mind your using his name when you meet the new prospect. About 90% of the time he will say yes. Don't forget to ask.

"A third method is called *center of influence prospecting.* In most towns or areas there are people who are well known and have a particularly wide circle of acquaintances. You should become acquainted with these people and you will find that they will be willing to give you names of prospects who would be interested in your product or service.

"A fourth method of prospecting is through *social or common meeting grounds,* such as church, P-TA, Red Cross, service societies, and alumni groups.

"The *direct mail method* of prospecting is also a very popular technique. By judicially selecting lists you can qualify to some extent the prospects before the mailing. Then the people who reply will be excellent qualified prospects and the chances for reply will be good.

"To obtain lists, use professional letter services, Chamber of Commerce buyer's guide, the Yellow Pages of your phone book, the town register. Finally you can borrow or trade lists with other companies such as auto agencies, department stores, newspapers, and the like.

"Direct mail should hit around the 15th of the month and should be received Tuesday,

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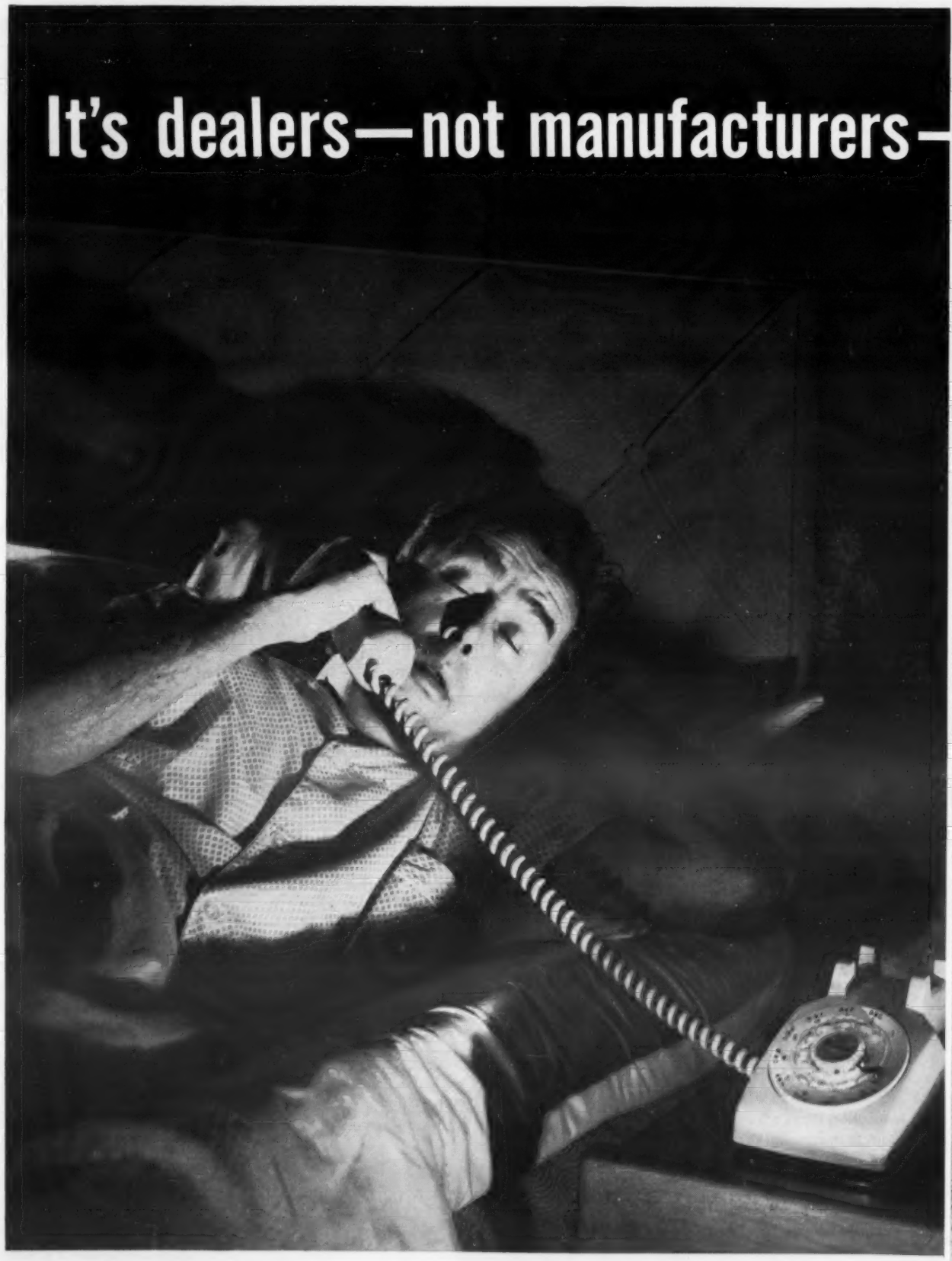
It's dealers—not manufacturers—



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Wednesday, or Thursday. Make your mailing as personal as possible and make it easy for the prospect to reply. Most of the manufacturers can supply you with the material. Try out several different pieces on different segments of your mailing list until you find the best.

'Casing the Joint'

After discussing prospecting, Rice continued with "the **pre-approach**—the time interval between when you learn the prospect's name and when you actually meet him.

"This is when you develop all of the information on a prospect as to his needs, accessibility, and ability to pay. I call this step 'Casing the Joint.' Every good bank robber is expert in the pre-approach. Believe me you will receive a very favorable reaction from your prospect when he learns during the interview that you have taken the trouble to find what he needs.

"Suppose you are going to call on a shoe store and offer air conditioning. Walk in as a visitor or customer, look around, size up the place, decide what is needed from a size and installation point of view. Determine what the limitations are for water, sewer, and electricity. Go around to the back of the store, look over the whole facility.

"If it is a residential air conditioning job, drive around the home, look over the building. What direction does it face? How much window area? Is there a basement, a second floor, etc.? Talk to neighbors, mutual friends, other contractors who might have done work there. You might be able to pin down quite closely exactly the kind of equipment you will be talking about. Then you will be prepared for a good interview.

"Now we have found our prospect and we know a great deal about his needs, abilities, and facilities. We have decided what we are going to say and what we are going to ask the prospect to do, so we have come to the next step toward the sale—**the approach.**

"This is a critical phase of the total sale where first impressions are made. You have to sell yourself and the interview. Generally this approach will not extend over two or three minutes but a favorable impression must be made in order to obtain a proper hearing for your story.

"There are some pointers which you might find useful in helping to create a favorable first impression. First is *appearance.* You should be clean, neat, conservative, and unobtrusive for the surroundings where the interview will take place.

"You don't want the prospect's attention on anything but your face and voice. If he is looking at the nude girls on your tie, he will never hear your story. If you have on dirty overalls the prospect's attention will be on whether you are going to get grease on his chair or walls.

"You should be *alert, wide awake, and enthusiastic.* The opposite usually gives the 'I don't care' attitude which is damaging. A smile is worth a million dollars at this point.

Get Favorable Location For Your Interview

During the approach you should get *a favorable location for the interview.* If you try to conduct a selling interview following a prospect around his store or office, or if you are in a noisy place with many distractions, your chances for a sale are much less. You should insist on this and if the man is sitting at a desk looking through papers while you talk, most salesmen simply stop, say nothing, until they get the prospect's full attention. If you can't get his full attention you may as well go home.

Starting Off with A Question

"Another problem you face during the approach is *opening remarks calculated to get attention,* and establish the mood.

"Start off with a question such as 'Have you found sales during the summer months falling off because of the heat?' Also shock statements are used such as 'I have a plan to save you money on maintenance and guarantee no down time on your refrigeration units for a full year, would you be interested?' You can refer to a mutual friend, hobby, or the fact you were referred by someone, or responding to a reply to a mailing.

"I would hesitate to use the phone for an approach unless I knew the prospect was definitely interested and there was not much question but that he would accept an interview.

Presentation and Demonstration

"Now we begin our **presentation and demonstration.**

Your story must be *well organized, carefully planned, and rehearsed.* You should control the interview and not let it get off on tangents. Meet objections and get back on the track. Ask questions and keep the prospect listening and participating. Use his name frequently to inflate his ego. Don't use sharp practice. Don't get confidential. Don't promise the world. Don't use sympathy ('My baby needs new shoes'), and finally don't lie. If you don't know, admit it.

People Remember 50% Of What They See, Hear

Use a *demonstration.* Surveys have found that people remember 10% of what they hear, 30% of what the see, and 50% of what they see and hear. Your demonstration should appeal to as many senses as possible. Use pictures and objects for the eyes. If you are talking about the ability to remove dust, show him a filter, let him feel it.

"One word of caution on demonstrations: Always be sure that what you are going to demonstrate will work before hand. You know the old story of the vacuum cleaner salesman who threw dirt all over the floor before he realized there was no electricity in the house.

Steps In Presentation

"Now to the specific steps in the presentation demonstration. Almost every successful salesman follows these steps consciously or subconsciously.

"The first is to *establish the prospect's needs,* also called the conditions, or establishing the problem which your product or service will solve. The first law of salesmanship is 'Sell benefits to needs.'

(Continued on next page)

—who get called out at night

The manufacturer sleeps snugly—all night long—although the Smiths may call *you* at 2 A.M. Their furnace has stopped running, it's miserably cold outside—and the baby is sick. Who crawls out of bed, makes the hurried service call in the pre-dawn darkness? Not the manufacturer!

An awareness of this fact shapes the product and policies of Lennox. It's one of the reasons you, the dealer, are recognized as the most important person in the entire organization.

As a businessman—with plenty of problems of your own—you're entitled to the very best help and cooperation from your equipment suppliers. Lennox takes this responsibility seriously—and it's the heart beat of the direct factory to dealer relationship.

If you're not a Lennox dealer, find out now what you've been missing.

LENNOX Industries Inc.

Established 1895

Marshalltown, Iowa • Columbus, Ohio • Syracuse, N.Y. • Fort Worth, Texas
Salt Lake City, Utah • Decatur, Ga. • Los Angeles, Calif. • Des Moines, Iowa
Lennox Industries (Canada) Ltd. • Toronto, Montreal, Calgary and Vancouver

'Orderly' Selling Techniques--

(Continued from preceding page)

"Generally you would first establish and get agreement on needs which are common to all in the category or group of the prospect. Such things as, 'Retail stores of all types need air conditioning in the summer if they hope to maintain business volume.'

"Second, you must *establish and get agreement on needs which are specific to this particular prospect.* Here, questions and answers will help you find them.

"You may find the man has a child allergic to dust or a store which has a large turnover of personnel during the hot summer months. You need only find and get agreement on two or three specific needs and you are set. More will only confuse and you want to hold out one for later.

"If the man will not agree he has a real need, he wouldn't take your product if you gave it to him and you might as well go home now. You have probably guessed by now that the better job you do in this step, the more convinced the prospect is of his needs, the more he will pay to satisfy them.

"The examples of needs I have used are basic to air conditioning or refrigeration. If you are competing you should find needs and benefits which will make the prospect want *your* equipment over others.

"I was talking to a contractor last fall who lost an air conditioning job on a 9-room house. He bid a 3-ton unit and lost out to a 2-ton unit. He said he lost on price and was sore at the whole business.

"By now you can see that he did not properly create the prospect's needs for 3 tons, and I think all of us would agree that for a 9-room house we might be able to do this. I have found out since that the customer never got a cool house, has burned out three compressors, and is rather upset with the 'successful' contractor.

"If the need is not obvious to the prospect you must create it and get agreement. You can use any method to do this including showing the prospect just how you calculated the job or take him to other installations. Part of a salesman's job is to create dissatisfaction, then create need, and get agreement.

Plan or Solution

"The next step is called *the plan or solution.*

"This is the actual statement of our solution to the agreed needs and what we want the prospect to do. We have to be specific and we must put it in terms the prospect will understand.

"How many of you have had salesmen call on you and ramble on without you ever knowing exactly why he is there or what he wants you to do? You lose interest in his story in a hurry if this situation occurs. This is the time in the sale to sell the prospect. Price, however, is not mentioned yet, even if he asks, because you haven't yet had a full opportunity to create need and value.

"In some cases your plan will be to make a survey and estimate the job; in other cases it will be to make an estimate on the spot and offer to sell the equipment now.

"I might say here that this over-all selling plan can take place over several interviews permitting time for estimating, etc., but it would be wise to use a miniature selling plan for each interview, where you might first be after obtaining the interview itself, then after permission to survey and estimate, and then after an interview to present the proposal and get the order.

"Do not offer many alternate plans or equipment. This will only confuse. It has been found that 90% of the people buy what is offered to them. So put yourself in the prospect's shoes, pick out the plan you think best, and if possible offer no alternates or at the most one.

'How It Works' Step

"The third step in the convincing process logically follows our statement of solution or plan. It is called the *'How it works' step.*

"This is a description, illustration, and demonstration of the plan we are offering to the prospect. We do this to establish a better understanding of the mechanics of our plan and to answer questions and objections.

"An example of this on selling preventive maintenance contracts would be to outline the start up service in the spring, the operation check in the summer, the shut down service in the fall, and the winter overhaul.

"On a commercial air conditioning job you would show or describe the size of the equipment and show the location of the unit, tower, and ductwork. You would describe the air distribution and temperature control.

"If one of the needs you created was smaller floor space than competition you would show exactly how much space it took, etc. I am sure you can grasp what I mean at this step. There is not too much I can say here as each one of you would talk about your own specific product service or ability.

"Closely following this third step is *the 'Results' step,* where you make a complete analysis of what the prospect will get out of your plan and you prove it.

Prove the Results That You Claim

"Salesmen usually review each need previously established and show results. I think one of the most neglected areas by contractors is to prove the results they claim. Obtain letters from satisfied users. Take the prospect to similar installations. Invite him to phone users who will give favorable comment. This should all be set ahead of time.

"After you have shown each of the original needs will be satisfied by the results of your plan it is time to spring a bonus benefit. Such as, 'Not only will you have less dust and be more comfortable but the resale value of your home will increase to a

(Concluded on next page)

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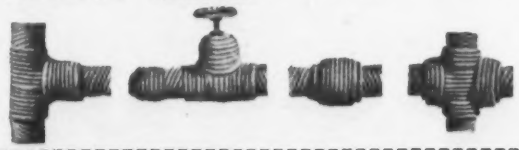

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Orderly Selling Technique for Air Conditioning

(Concluded from preceding page)

point that your long term cost of the unit is actually half. Let me show you an example.'

"Don't leave out a benefit just because your competitor has it. On one job I lost, I asked the customer why. He said I didn't have an item that my competitor had. Both the competitor and I knew we each had it but he stressed it and I never mentioned it.

"Now is the time to decide whether to take the last step which is **the closing.** You must have affirmative answers to the following questions about the prospect.

"Is he convinced of his need? Does he understand what you want to do and how it works? Is he convinced that what you want to do will fullfill his needs? Have all his questions and objections been answered? Is he in a friendly positive frame of mind? Do you still have his interest?

"If you are not sure of the answers you might try what is called a trial balloon. This could be a question like, 'How does it look so far?' or 'Do you agree this looks like a good proposition?' If you get no for an answer find out why and keep reviewing the earlier steps until he says yes. Then start the close.

"Don't get too nervous or excited now when you start to smell the money. Be calm, alert, and particularly enthusiastic.

Direct Method of Closing

"There are several methods used in the close and we shall list a few. The first is the *direct method.*

"Here you make a strong appeal to emotional buying motives and simply ask for the order. An emotional factor to introduce now might be fear that price would go up shortly, hot weather is just around the corner, and business and profit could suffer if immediate action was not taken. Also preventive maintenance should start now or an unscheduled shut down might occur tomorrow and cost more to repair.

"In the direct method you should have the order all written up for the customer's signature and if a bank loan is needed the application forms should all be made out or available so that it is easy to say yes.

Taking-Order-for-Granted Method of Closing

"The second closing method is to *take the order for granted.* Don't ask for the order, just show the man where to sign. This takes considerable skill on the part of the salesman because he must create a complete atmosphere of absolute confidence and have complete control of the interview and prospect. There are many who use this method, however, with success.

Indirect Method

"A third closing is *the indirect method.* This can involve getting the decision diverted to a minor issue. An example would be to get permission to put through the application for the bank loan, or get permission for you to order equipment and have it on hand—no obligation of course.

"The fourth method of closing is to *get the prospect in so deep that he has to buy.* This can be accomplished by making an installation on approval or for trial and test. You can also do this by personal surveys and service or calculations, etc. Having a bank loan all available with all application work finished is also another method.

"Sometimes special clinches are used at the closing. These may include (a) temporary or special prices for off season, (b) gifts, (c) added special services if act now, (d) contests, (e) special personal appeals, or any other method to dramatically demonstrate the cost of delay.

"You don't always have to obtain the required action at the time of closing. If an unavoidable delay will be involved be sure to specify the time that some action is to be taken.

"Do not accept the statement of, 'I will get hold of you next week.' You should say, 'Supposing we get together next Wednesday at 2:00, I will be glad to stop by.' If you don't make it specific the prospect will never make the decision or worse, he will make it when your competitor comes by.

When You Get Order Get Out Fast

"Finally, a most important rule for the close. *When you get the order get out.* I don't mean five minutes later; I mean as soon as you can get to the door.

"Many, many orders have been lost after the man said yes and the salesman hung around. The time to reassure the customer about his decision is after the installation is made or the service contract is in force."

Rice concluded with a bit of advice: "If there is one personal attribute of a good salesman which we could call common to all it would be persistance."

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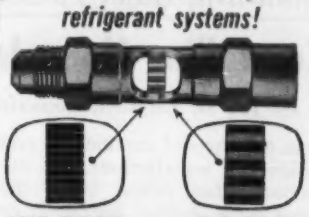

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If moisture enters the system, every other color bar changes from green to yellow—then it's bad—the dehydrator should be replaced. When the system is moisture-free again, the Reactor color bars will change back to their original solid green color.

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The Consulting Engineer's Column

Aim of this column is to present information of particular and current interest to Consulting Engineers, and those active in application engineering work generally. The editors invite contributions to the column from all who are engaged in such activity.

Shhh-h-h, Quiet Please!

Controlling Noise In the Ductwork

By Joe H. English, Consulting Engineer, Abilene, Texas

In all types of commercial and residential installations, one objection often raised is to the noise made during operation of the equipment. Much of this noise is in the ductwork, and it is about this noise that this article is written.

Any abrupt or sudden sound that does not last long enough to convey any idea of musical pitch, or mixtures of discordant sounds, is noise. Sounds which are audibly unpleasant either by virtue of their loudness, pitch, or quality are noise. Noise is usually caused by the vibration of surfaces in contact with air.

Sound travels through the air with about the speed of a bullet. Table I lists the velocities of sound through several different substances.

1 Decibel Is Minimum Change Detectable

Sound intensities are measured in the decibel (db) unit. One decibel is the minimum change in sound intensity detectable by an average person in the usual range of frequencies and intensities. As its name implies, the decibel is 1/10th as large as the bel.

A one decibel rise in intensity level is equal to an increase of over 25% in intensity of sound energy. A reduction of less than 10 db. in intensity level makes a noise seem one half as loud. Any intensity level of a sound above 70 db. is usually objectionable.

Table II lists typical sound levels in decibels. The "threshhold of feeling" is 120 db. or 1,000,000,000,000 watts per square centimeter intensity. At the low intensity level, the rustle of leaves or whispers, the decibel is only 10 and the amount of sound energy in watts per square centimeter is also 10. Sound energy is absorbed when it is converted by friction into heat.

Quite often, the easiest way to control a noise is to remove its source, but that is another subject. The primary concern here is with duct noise. Utmost care must be exercised in the proper design and installation of the ducts and insulation, since noises usually result otherwise.

Reference should be made to the ASHAE Guide for proper gauges, velocities, etc. Pipes too small and velocity too high will always cause air noise. Flimsy duct construction or sharp bends in the duct will cause vibration.

Importance of Noise Varies with Installation

In a residential installation of 35 db. you will probably want to keep the air velocity in the duct under 800 f.p.m. and the design pressure drop per 100 ft. at less than .08 in. w. c. However, for a recording studio this would be excessively noisy.

For a general office area, it would not have to be so quiet. Some rooms are better if not too quiet. For instance, in a drafting room with a very low sound level, the sharpening of a pencil or the tearing of a piece of paper would be disturbing.

To be on the safe side, before designing a duct system, talk to the owner and find out just how quiet he will expect the job to be. This will possibly relieve you of many headaches later and every job has enough without inviting more.

Install a flexible connection where the duct leaves the equipment. The material should be at least 6 in. wide and the gap between metals not less than 1 in. If the equipment is a furnace, be certain that the material is non-combustible and, in any case, air-tight. All duct panels, not insulated, should be cross-broken to prevent vibration and breathing of the ductwork.

Table I—Velocities of Sound Travel

Substance	Feet per Second
Aluminum	16,740.00
Steel	16,410.00
Brick	11,980.00
Water	4,795.00
Air	1,088.50

Table II—Typical Sound Levels

Decibel	Description
120	Threshold of feeling
110	Deafening, nearby riveter
90	Very loud, noisy factory
70	Loud, average street noise
50	Moderate, average office
40	Quiet, apartments or hotels
30	Faint, average auditorium
20	Studios—recording, movie, radio
10	Very faint, sound proof room

Noises Are Deceptively Loud In Empty Rooms

Empty rooms facilitate the transmission of sound; therefore, do not try to judge the room noise level until the room is furnished, carpeted, and draped. Hard surfaces reflect sound and soft surfaces absorb sound. If a material is too soft, sound passes right through it.

Grille manufacturers furnish data on their grilles that will assist you in selecting a grille that does not have an excessive face velocity. Usually, low frequency grille noise depends upon the size and shape of the grille, air temperature, and the mass flow per minute.

High frequency grille noise usually depends upon grille area, air velocity through the grille open area, and the pressure drop

Table III—Probable Room Noise from Different Types of Systems

Decibels	System
25 to 30	Systems serving sound reproducing rooms
25 to 45	**Acoustically treated** residential and central station systems
35 to 47	Induction room unit
40 to 52	Fan-coil room unit
40 to 60	Package air conditioners
48 to 60	Room air conditioners
40 to 70	Central station system without acoustical treatment

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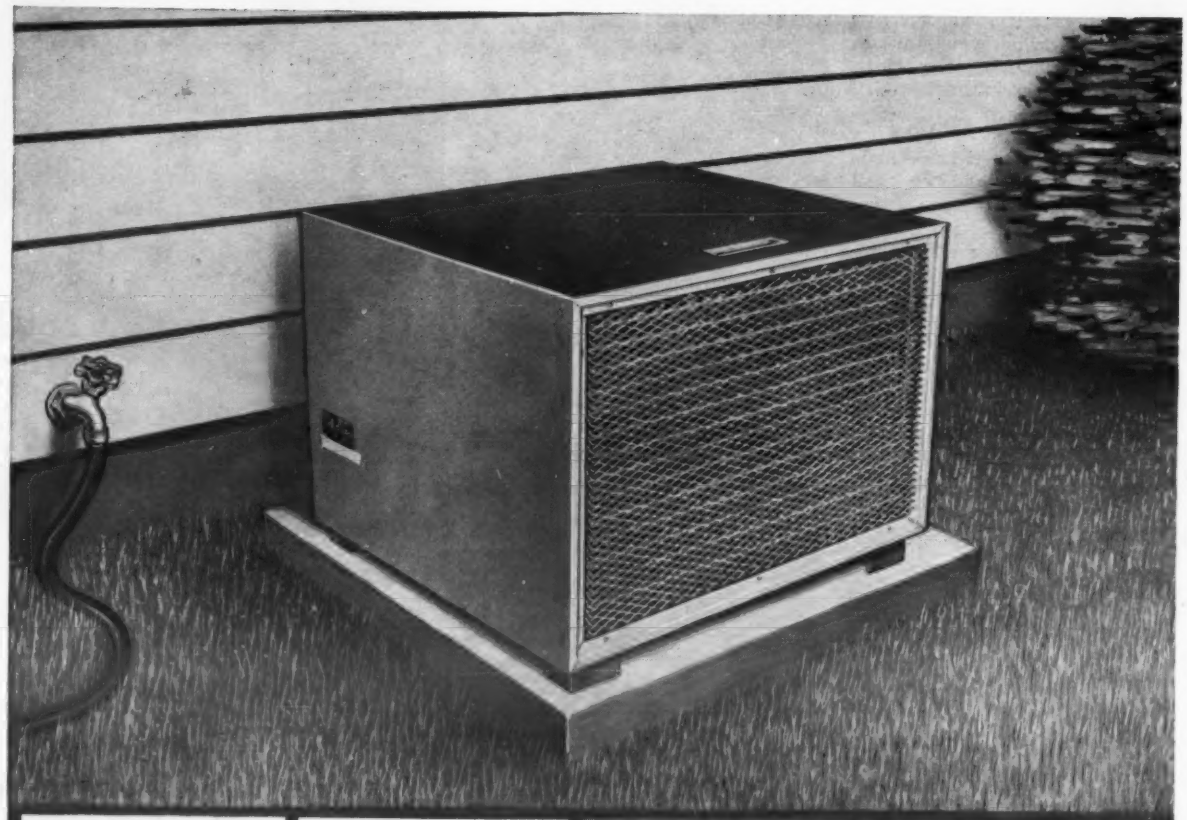
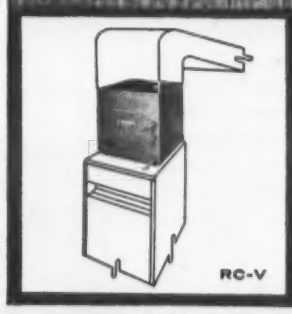
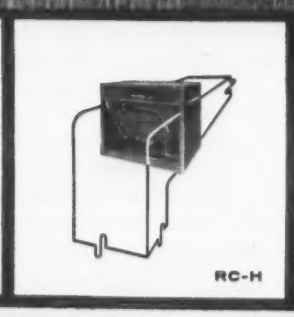
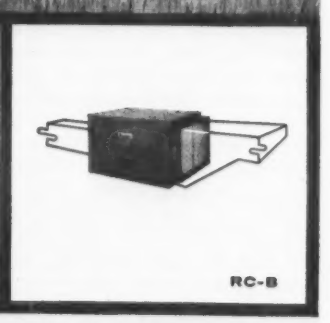
Here's a top-quality, condensing unit –









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There's an American-Standard evaporator for *every* installation—big home, small home, *any* size home (and for small commercial jobs, too). Four models—RC-V, RC-H, RC-C and RC-B—for every furnace and ductwork design, and in capacities for 2-, 3-, 4- and 5-hp installations. All units have the added feature of an expansion valve with a thermally aged diaphragm for longer, more reliable service. Be sure you see the new "spec" sheets—and the new low prices—at your distributor *now!*

through the grille. Select a grille that will give you the required throw without objectionable noise.

If necessary, provide blades behind the grille, otherwise, all of the air might come out at one end of the grille and be noisy with poor distribution even though the chart indicates a low noise level. Do not locate a grille tap near the equipment air discharge. Usually a distance of about 10 ft. is far enough.

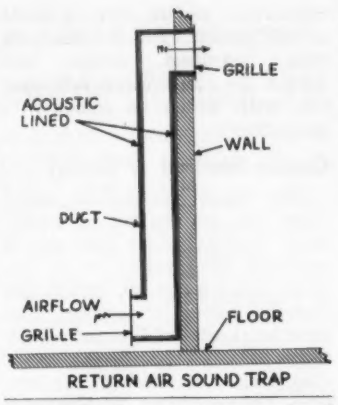
Place Absorption Plenum Between Equipment And Duct

An effective method of absorbing sound is to furnish an absorption plenum between the equipment and the duct. The cross-sectional area of the plenum should be at least 10 times the area of the blower discharge and the plenum should be square.

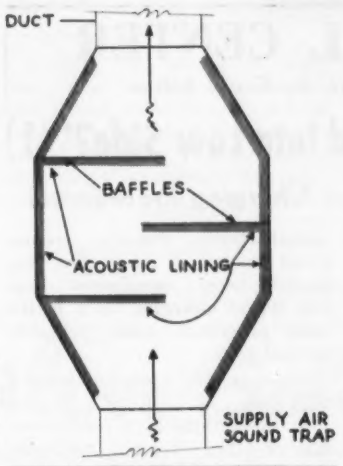
Construct the plenum from heavy gauge (18 ga.) metal with angle iron framing at corners. Acoustically line the plenum with an efficient acoustic material; and, for still more effectiveness, install an egg-crate acoustic-lined grid across the air stream the same size as the cross-section of the plenum.

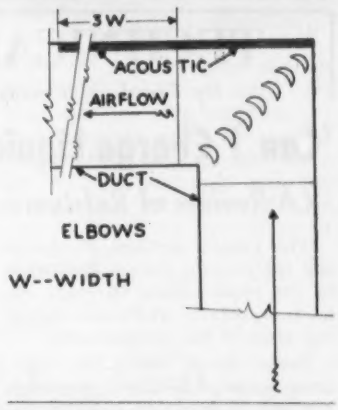
Duct liner can do wonders for quieting or absorbing noise. An effective sound absorption material will be highly absorbant at low frequencies. This is enhanced by fastening the absorptive sections infrequently. Thick material is best for low frequencies below 500 cycles per second since low frequencies radiate equally in every direction.

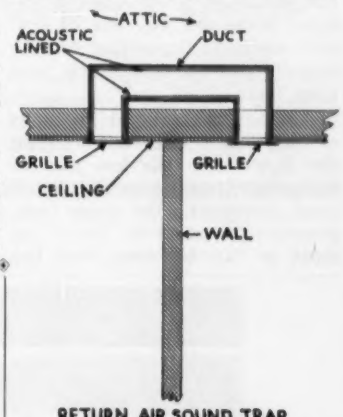
However, it is usually impractical to use material thicker than 1 in. with the duct size increased accordingly. High frequencies converge in the direction of the duct opening. Thin material, if mounted on hard solid surfaces, will absorb only high frequency sounds.



RETURN AIR SOUND TRAP







RETURN AIR SOUND TRAP

A good duct liner will be durable, fire and mildew-proof, odor-free at all times, and low in moisture absorption. A semi-rigid material, such as 1-in. vinyl-coated glass fiber, is good for irregular or curved surfaces. The absorption coefficient should receive considerable attention in choosing an acoustic duct liner material.

Sound absorbing materials derive their effectiveness from capillary porosity of the surface or from the dissipative vibration of surface layers. The attenuation in decibles is directly proportional to the length of lined duct at a given frequency. The material cannot reduce the level of the noise received directly from the source.

This may come as a surprise to some, but small areas of material are more effective than an equal area concentrated in one spot. However, there will be some times when the liner material will be dual-purpose insulation serving both acoustically and thermally, in which case you will use care to fully cover all interior surface.

Apply all duct liner, with the coated side next to the air stream, in accordance with the manufacturer's recommendations and point-up all penetrations, seams, and joints with a good cement. Effectiveness is even greater when the absorptive material is applied to non-opposite walls.

Effectiveness varies with the frequency and is greater at high frequency.

For maximum efficiency, apply the duct liner material near the duct edges and corners rather than in the center of the duct, as commonly supposed to be correct.

Sound Traps Especially Suited to Existing Systems

Sound traps, lined with acoustic material, are effective in noise reduction. They are especially adaptable to an existing system that proves to be objectionably noisy and most of the duct is inaccessible.

Another helpful application of sound traps is in the return air systems to prevent sounds from leaving one room and entering another or the corridor, in a central return system. Much duct noise will be absorbed by elbows lined on the back downstream side for a distance equal to three duct widths.

There are many things that affect the amount of noise in a duct. Noise is tricky, so treat it with caution and use a generous amount of duct liner in all jobs and they, in turn, will sell you more jobs.

name-brand at an unbeatable price!

Here it is—the finest condensing unit on the market!

It's the all-new AC-B condensing unit in 2-, 3-, 4- and 5-hp sizes. If you haven't seen the "spec" sheets on this equipment, be sure to contact your American-Standard Air Conditioning Division distributor today. And be ready for a surprise when you see the prices! For example, the suggested dealer price for the AC-2B, a 2-hp unit, is only $361.84. And this value is typical of the whole line!

New AC-B has improved design throughout!

To start with, the AC-B is one of the most compact, easy-to-handle units made. This fact, plus these really advanced design features, gives you a *solid* sales advantage:

- Controls are *sensibly* located so you can reach them easily.
- Suction and liquid line valves in front for simplified servicing.
- High-voltage line current is supplied *directly* to condensing unit.
- Relay control panel has improved-design delay sequence feature.
- Entire electrical system approved by Underwriters' Laboratories for outdoor operation.
- 4- and 5-hp units have *two* condenser fans and motors for maximum cooling efficiency.

Add to the new AC-B any of the American-Standard evaporators, and you have the finest cooling system made.

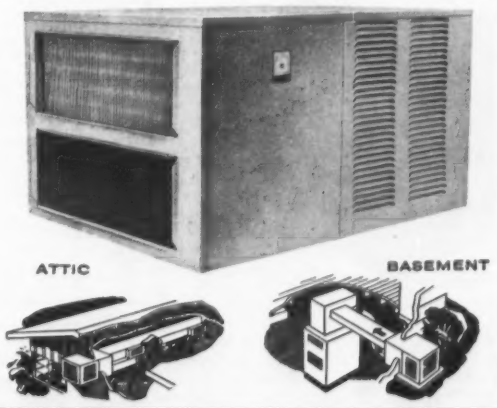
LOOK!—A special bonus that puts money in your pocket!

You get *extra* profits for buying American-Standard Air Conditioning Division equipment *now*, during the special "Bonus Bonanza" offer. With every air conditioning unit you buy before March 31, 1959, you get two bonus certificates. These certificates are as good as cash. You can use them to buy anything your distributor handles. Tools, fittings, replacement parts, units . . . anything! It's a real Bonus Bonanza!

See your American-Standard Air Conditioning Division distributor today—he'll fill you in on the money-making details. Call him right now!

ACP—unmatched for price and value!

It's been called "the most underpriced air conditioning unit on the market!" But don't let the price fool you—the ACP is a finely engineered *quality* unit. Just compare these features with any other package unit: *twin* compressors give continuous air circulation and positive humidity control, with either full- or half-capacity cooling automatically controlled by a thermostat; exclusive heat exchanger cuts refrigerant temperature by an *extra* 20 degrees; specially designed condenser fan gives unmatched cooling efficiency. And the ACP is protected by a full Five-Year Warranty!



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TECHNICAL CENTER

By Frank J. Versagi, Technical Editor

'Can I Charge Liquid Into Low Side?' (1)

(A Review of Refrigerant Charging Procedures)

The classic method of charging refrigerant into a system is in the vapor phase through the suction service valve or charging stud of the compressor.

Some know no other way; some know of alternate methods but reject them for several reasons; some use any one of several methods depending on the system and on how much time they have.

Among the several methods of charging refrigerant, feeding the liquid into the low side of hermetic compressors causes most comment. On some compressors it can't be done; on most it can be done, but the manufacturer doesn't recommend it; on a very few the manufacturer recognizes low-side liquid charging as a legitimate procedure when properly carried out.

Systems can also be charged high side.

To lay groundwork for discussion of other charging methods, it is well to review the reasons for general acceptance of low-side vapor phase charging.

Gas charging, low side, can be used on any compressor which has a service valve or charging connection on its suction side—hermetic, semihermetic, or open. Once a man has mastered the relatively simple arrangement of refrigerant cylinder, charging lines, manifold, gauge, and valves, he can charge any system with which he comes into contact.

Classic Method Is Safest

The classic method is safest from the standpoint of equipment damage; since only gas is entering the system, it is unlikely that slugs of liquid can damage valves or pistons. The slow intake of refrigerant allows time to detect some kinds of operating difficulties in the system. Overcharging is unlikely if the serviceman keeps his eye on the liquid line sight glass.

It is commonly thought that charging vapor prevents moisture from entering the system, or at least that it reduces the amount which will enter with the refrigerant. This is an erroneous conception.

First, the gas phase of the several refrigerants vary in their moisture relationship to the liquid immediately under them. At equilibrium, the p.p.m. moisture in R-22 vapor in a cylinder containing liquid are less than in the liquid. But in R-12, the vapor phase contains more p.p.m. moisture than the liquid.

Second, the average moisture content of factory-shipped refrigerants is so low as to make meaningless any distinction between charging liquid or vapor on the basis of water concentration. After a charge is in the system, the moisture level will average what it was in the original cylinder, regardless of the charging procedure.

Third, when refrigerant is charged from service cylinders which may have contaminated the refrigerant with dirt and moisture, competent servicemen charge through an adequately sized drier, whether charging liquid or gas. If no drier is used, vapor charging does have the advantage of preventing any solid matter and actual dirt from flushing into the system.

The arguments and reasons presented for low-side gas charging imply the objections which are raised to **charging liquid** into the suction side.

Foremost is the fear of damage to compressors by slugs of liquid reaching the functional areas, this fear quite logically based on the fact that refrigeration compressors are gas pumps, not liquid pumps. Tied in with this is the general fear that dirt and moisture are more likely to enter a system being charged with liquid. Then, burnouts due to contamination are more probable.

Also, when liquid refrigerant reaches the crankcase, the viscosity of the oil is lowered, with possible poor lubrication resulting. Oil pumps may vapor lock; foaming may occur. "Excessive refrigerant in the crankcase is the usual cause of wiped bearings," according to one authority.

Majority of Compressor Mfrs. Oppose Low-Side Liquid Charging

Because of these several objections, the majority of compressor manufacturers do not recommend or allow low-side liquid charging. Nevertheless, some experienced servicemen and some manufacturers of condensing units or packages who production - line - charge their equipment use this technique.

Further, written procedures describing liquid charging into the suction side are provided by some users of compressors whose manufacturers disclaim the practice. In all such cases, use of the procedure is restricted to those men who have attended factory schools and learned the techniques first-hand.

Low-Side Liquid Charging Is Faster

The one reason for using low-side liquid charging is speed. To charge, say, 30-40 lbs. of refrigerant in the vapor phase can take 45 minutes, an hour. In the liquid phase, the same quantity can be charged in a few minutes. The cylinder does not drop in temperature and require clumsy or dangerous warming as is the case in extended low-side vapor charging.

So people wonder: Is low-side liquid charging practicable; is it safe; where should and shouldn't it be used? Because of repeated requests for information on this general subject, the NEWS contacted all major manufacturers of compressors. (Summaries of their replies will be printed at the end of this completed article.)

In its request for manufacturer data and opinion, the NEWS stressed that the day is gone when only company-authorized servicemen work on that company's equipment, and that it is wiser to disseminate information generally.

Some companies vehemently disagree with opening up this kind of information. "We restrict the recharging and repair of hermetic refrigerant circuits to those who have been authorized by our service department as being equipped and technically qualified to handle such work. Therefore, written procedures

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- All models equipped with hot-dip galvanized propeller fans. Centrifugal blower optional on all models through 20 tons.
- Two and three-ton fan models have direct drive, totally-enclosed motors. All others are belt driven with drip-proof motors.
- Centrifugal blowers have self-aligning graphited bronze sleeve bearings mounted on outside for easy lubrication.
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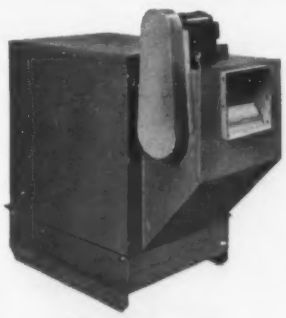
- Water outlet in sump has large strainer and anti-cavitation plate, easily removed for cleaning.



CAPACITY DATA*		3 GPM/TON
Model	*Wet Bulb °F* *Inlet Water °F* *Outlet Water °F*	78° 93 85
2 WS	TONS	2.0
3 WS	TONS	3.1
5 WS	TONS	5.1
8 WS	TONS	8.1
10 WS	TONS	10.0
16 WS	TONS	16.1
20 WS	TONS	20.0
25 WS	TONS	25.1
30 WS	TONS	32.2
40 WS	TONS	40.0
50 WS	TONS	50.2

*Based on Tower Rejection of 250 BTU/MIN/TON

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are issued only to these authorized repair stations," was the way one company put it.

Carrier Corp., on the other hand, after emphatically stating its position, added, "Thank you for writing and offering this opportunity to be of service. The more widespread this knowledge is, the better we like it. It may help prevent damage to our equipment."

Field investigation shows that even authorized service organizations will break away from company-recommended procedures where such departures are justified in their judgment.

With this background we are ready to consider charging techniques, other than the classical low-side vapor charging. These are—low-side liquid charging and high-side liquid charging.

(Next: Low-Side Liquid Charging)

Ranco Earnings Up 31% During 4-Month Period

COLUMBUS, Ohio — At the annual meeting of the shareholders of Ranco, Inc., A. M. Hoover, president, reported that in the first four months of the fiscal year ending Jan. 31, 1959, consolidated net earnings had increased 31% over the same period in the previous year with an increase in sales of 8% in the same period.

These results were obtained notwithstanding a substantial loss of sales to the automotive industry, it was noted.

The shareholders authorized the convertible preferred shares which will be used in the acquisition of the Wilcolator Co.

This acquisition, Hoover commented, "will broaden our product base and for the first time provide Ranco with the automatic controls for and a market in the electric and gas stove industry."

In addition, there is a substantial European market for Wilcolator's controls which can be produced there in Ranco plants and Wilcolator has a Canadian plant in operation where Ranco has none, he added.

The international business of Ranco continues to grow which has again required expansion of the Scottish and Italian production facilities. In order to assure adequate coverage of the European market a manufacturing plant in West Germany is being established, it was also stated.

At the shareholders' meeting all of the directors were re-elected, and at the meeting of the directors which followed, all of the officers were re-elected.

Directors declared a quarterly dividend of 30 cents per common share, payable April 6 to stockholders of record March 20.

So. Calif. RACCA Plans Dinner Dance March 20

LOS ANGELES — Refrigeration & Air Conditioning Contractors Association of Southern California will hold a dinner-dance Friday, March 20, at Larchmont hall, 118 North Larchmont here, Executive Secretary Henry B. Ely has announced.

8 ASRE Sections To Hold Regional Meeting In Washington March 10

WASHINGTON, D. C. — A regional meeting of eight sections of the American Society of Refrigerating Engineers (which recently merged with the ASHAE) will be held at the Shoreham hotel here on Tuesday, March 10, it was announced recently by the National Capital Section.

In addition to the local unit, other sections which will attend are those in Philadelphia, Harrisburg, Johnstown, Pittsburgh, Baltimore, Norfolk, and Richmond.

The program calls for an executive committee meeting and luncheon starting at 11:30 a.m.; inspection trips to the National Bureau of Standards and the National Broadcasting Co. in the afternoon; social hour at 6 p.m.; dinner at 7, and a meeting and program at 8 o'clock that evening.

Speaker will be Paul Achenbach, chief, Air Conditioning, Heating & Refrigeration Div., National Bureau of Standards. His subject: "Air, Moisture, and Heat Transfer In Refrigerated Structures."

During the inspection trips, the Standards Bureau will feature a look at its work on heat pumps, refrigerated trailers, air-cooled condenser standardization, and possibly its high voltage laboratory. NBC will feature a look at the latest developments in color TV studios and technical center as well as the air conditioning systems which serve them, according to the announcement.

The National Capital Section also announced that April and May meetings have been changed from previous plans because of the ASRE-ASHAE merger. They will be joint meetings with the Washington Chapter of the ASHAE inasmuch as officers of the new group have to be nominated and elected, it was explained.

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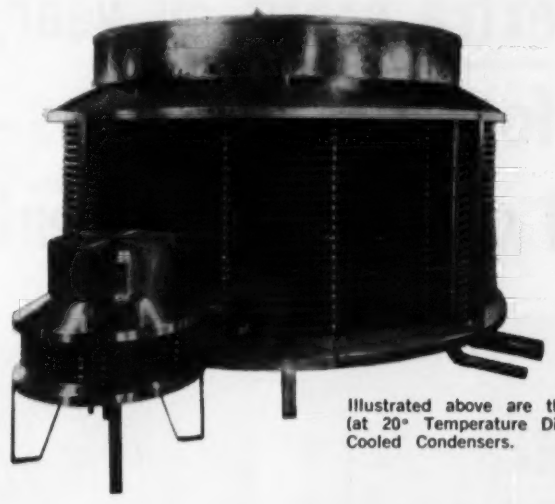

Illustrated above are the 3 ton and 80 ton (at 20° Temperature Difference) Fandaire Air Cooled Condensers.

Here's WHY Fandaire Air Cooled Units Are Better!

1. **GREATER CAPACITY** . . . Fandaire air cooled condensers are available in 2 through 80 ton units. Fandaire air cooled condensing units are available in 2 through 10 ton units. All are designed to fit any commercial, residential or industrial application.
2. **MORE ECONOMICAL** . . . all Fandaire units are comparative in actual dollar cost to competitive units. But when you read all the extra benefits listed below — available only on Fandaire Air Cooled units — you'll have to agree that these units are by far the most economical.
3. **GREATER FIN SURFACE EFFICIENCY** . . . Fins are helically formed around a heavy-wall copper tube. They are spaced 8 fins per inch to permit free passage of lint and dust carrying air. The shoulder of each fin is firmly swaged to the tube AND to the adjoining fin. No foreign matter or corrosion can form between the tube and shoulder to cause loss of heat transfer, even after years of exposure. This shoulder provides maximum contact with the tube and guarantees that the greatest amount of heat will be transferred to the fin.
4. **UNIQUE FIN DESIGN** . . . permits greater heat transfer than plate type fins. Fandaire fins are 20 thousands at the base tapering to 8 thousands at the tip. As heat is dissipated along the fin, less thickness is necessary to maintain the highest heat temperature and transfer. Where even thickness plate type fins will lose temperature towards their tips, thus losing their heat transfer efficiency, the pyramidal Fandaire fin will not.
5. **LESS POWER REQUIRED** . . . This unique fintube offers a lower ratio of fin surface to prime surface (13 to 1). At the same time they have a much greater amount of prime surface than most competitive condensers. This permits a better rate of heat transfer and lower static pressure permitting MORE air to move across the coils with LESS power consumption in the fan motor.
6. **TRUE COUNTER FLOW** . . . an action in which the hot refrigerant is gradually cooled by flowing against (or counter to) the source of the cooling medium. In other words the refrigerant flows hot to cool, or counter to the cooling medium (air) which flows cool to hot. The hot gas enters the condenser tubes at the inlet header inside the condenser and makes 5 complete circles before leaving the tubes at the outlet header. Since the cool air enters the condenser around the periphery of the coil and is pulled through the bank of tubes, the coolest air is always in closest contact with the tubes carrying the coolest gas. This provides the best possible counter flow and assures a greater mean temperature difference at all times giving a higher rate of heat transfer, lower condensing temperature and a greater degree of sub-cooling.
7. **POSITIVE CONDENSATE DRAINAGE** . . . each row or circuit of tubes slopes downward at a 30° angle. The outlet tubes are lower than the inlet tubes assuring a better drainage of all condensate as fast as it forms. No pockets of compressor oil can form to act as an insulator between the hot gas and the air cooled tube walls.
8. **STRAIGHT THROUGH FLOW** . . . each circuit consists of one continuous length of a single tube. This completely eliminates all pressure drop caused by the return bends on rectangular units. This long sweep, one circuit construction approaches the almost non-existent pressure drop of a single pass unit while having all the advantages of a five pass unit.
9. **RETURN BEND LEAKAGE ELIMINATED** . . . approximately 70% less solder joints on the Fandaire straight through flow design than are required by rectangular units and their return bends, means leakage due to bad joints is almost completely eliminated.
10. **VERTICAL AIR DISCHARGE** . . . is standard construction. No air scoop or deflector is necessary. This vertical air discharge eliminates any tendency to recirculate hot air and is a must on multiple installations. In addition, the 8" fan stack on all units also insures against any recirculation of hot air thus increasing the efficiency of the fan. Wind from any direction can be used and no dead spots can be found on the face of the coil since the air is drawn around the circumference of the coil. It also eliminates any tendency to kill shrubbery and grass and to peel paint.
11. **HOUSING** . . . all models are weatherproof and come in attractive, corrosion resistant housings of spun construction. The extremely low silhouette eliminates any "eye sore" look. Models up to 7½ tons are made of aluminum alloy. All other models are galvanized after construction for durable, maintenance free finish. The air conditioner units are supplied with a two piece, wrap-around skirt.
12. **MOTORS** . . . either direct drive or belt drive, weather proof or totally enclosed, ball bearing, permanently lubricated motors are used on all Fandaire units.
13. **FANS** . . . are axial flow type and are constructed from plated, heavy duty corrosion resistant steel, aluminum or cast aluminum.
14. **GUARANTEE** . . . all units are fully guaranteed for one year against defects in workmanship and material.
15. **LEGS** . . . are standard equipment. They are designed to easily fit on existing bases when being used as replacement for water towers. They are sturdy and provide ample support. No guy wires or other supports are needed to keep unit from tipping over.
16. **FAN GUARDS** . . . are also standard equipment. They are made of heavy gauge wire spaced at ½ inch to prevent birds, leaves and other matter from interfering with operation.

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REPRESENTATIVES IN PRINCIPAL CITIES

Refrigeration Problems
And Their Solution
(As Written by Paul Reed)

Thermometer In Service Work (1)

The pocket thermometer is one of the most familiar badges of the refrigeration service engineer. If you see a fellow with a couple of pocket thermometers clipped into his shirt pocket, along with some fountain pens, pencils, and a scale with refrigerant temperatures and pressures on it, he is apt to be a refrigeration service engineer.

Much has been said and written about the use of gauges in refrigeration and air conditioning service; and rightfully so, for to the man who can properly interpret the pressures in various parts of the system, gauges are indispensable in analyzing the causes of trouble.

But thermometers can also be very effective tools in refrigeration and air conditioning service. Instead of merely using a thermometer to check evaporator temperature, it can also be used to check temperatures at other parts of the system. Many times, the thermometer will tell the same story as a gauge, sometimes better; and it can be used at some points in the system that do not have gauge connections.

Many service engineers do not realize this, and are not taking full advantage of their thermometers. They are using their pocket thermometers to check evaporator temperatures, and perhaps condenser water temperatures, but they are overlooking many other uses of this valuable tool.

SERVICEMEN SHOULD CARRY TWO THERMOMETERS

Every refrigeration and air conditioning service engineer should carry *two* pocket type thermometers, not just one. A number of the most helpful uses of thermometers to the service engineer involve *temperature differences*—from one end of a coil to the other, for example, with one thermometer secured to each end of the coil—so two thermometers are used.

However, the two thermometers must be accurate; or at least they must read the same at the same temperature. The ordinary inexpensive pocket thermometer is often not very accurate; perhaps it may be as much as a degree or so off, either on the high or low readings.

Of course, any instrument that we use and depend on should be as accurate as is practical, and this applies to thermometers as well as gauges, electric meters, scales, etc. However, in those cases in which we are mainly interested in temperature differences even more than in the actual temperatures, we can stand some inaccuracy of the thermometers, *provided,* that the two thermometers are off in the same amount and in the same direction, colder or warmer.

For instance, if both of our thermometers are accurate, and are put in brines of different temperatures, their readings will be accurate, and the difference in their reading will also be accurate.

If both of the thermometers read a degree high and are put into the same brines, the temperature readings of both brines will be wrong but the temperature difference will be correct.

But if one of the two thermometers is accurate and the other is a degree high, then the temperature of one brine will be checked accurately, and the other a degree high; but the difference will be read as one degree more than it actually is.

Even worse, if one thermometer is one degree high and the other one degree low, the readings for both brines will be off one degree and the temperature difference will be two degrees less than the thermometers indicate.

Where temperature differences are small, as they often are in refrigeration and air conditioning work, a degree or so too much or too little can be a high percentage of the total temperature difference, and may therefore result in a high percentage of error.

So if you are to carry two thermometers to use together, see that they are accurate or at least match. Preferably they should be accurate; but if they are slightly off, make sure that they are both off in the same direction and in about the same amount.

Moreover, the accuracy of thermometer may vary somewhat over the range of its scale. It may be fairly accurate in the lower part of the scale, and be off a degree or more in the higher temperature readings; or vice versa. This is more apt to be true of the cheaper grades of thermometers.

SELECTING A THERMOMETER

A thermometer should be selected for the range of temperatures with which it is to be used. The smaller the range of the thermometer, the larger can be the degree divisions or graduations, and the more accurately it can be read. The pocket thermometer for refrigeration work is usually calibrated for temperatures of about -30° F. or -20° F. to about 120° F.

Thermometers are made in two main grades; the laboratory or standard grade, and the cheaper commercial grade. The laboratory type is usually 12 to 15 in. long, with or without a metal case. It can be obtained in a wide variety of ranges from about -150° F. to about 400° F.

For best accuracy in refrigeration work, the scale range should not exceed 150° F.; that is, -150° F. to 50° F., -30° F. to 120° F., etc. The laboratory type can be obtained in one degree divisions.

The pocket thermometer is usually about 5 or 6 in. long, with a steel protective case. It is made in two grades. The standard grade is of the same approximate quality as the laboratory type, but cannot be read as accurately because of its smaller degree divisions resulting from its shorter length. The pocket thermometer is also made in the cheaper commercial grade, that may in appearance look much the same as the higher quality, standard grade.

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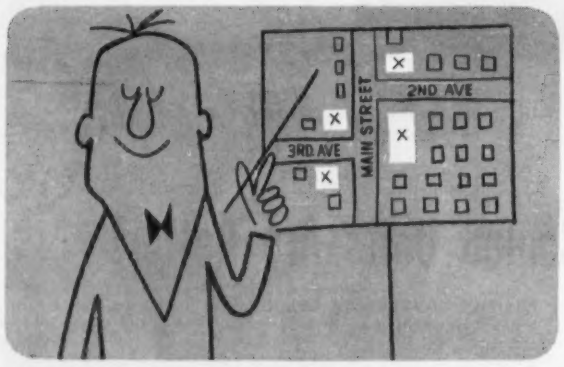

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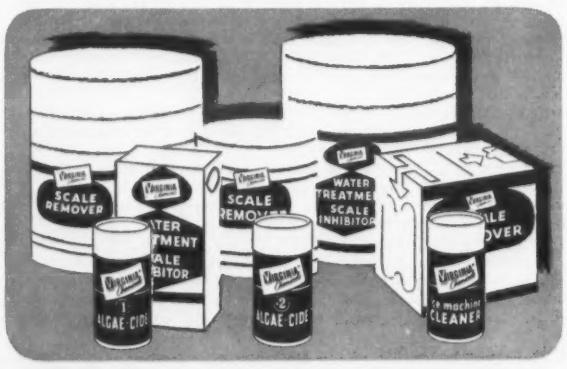

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is higher. At the higher price, the manufacturer of the thermometer can take more care in constructing the thermometer, and in testing and calibrating it.

Thermometers are just like other tools; you get about what you pay for. The experienced service engineer buys tools of good quality; they cost more, but they last longer, do their job better, and save their owner time and effort.

CHECKING A THERMOMETER

If you suspect that your thermometers are not accurate, you can make a rough check that is accurate at one point but does not show whether the thermometer is accurate over its entire range. Ice, of course, melts at 32° F. (0° C.), so your thermometers should read correctly in ice water. Be sure that the ice is in small pieces such as chipped or shaved ice, and that there is a great deal of ice in the solution, not just a few pieces of ice floating around. Stir it gently and use only clean, soft water.

Hold the thermometer at the upper tip only, and keep at least about 3 in. of the thermometer in the ice and water solution. Read it with the bulb immersed and with the eye at the same level as the top of the column of the liquid in the thermometer. You can read a degree or so too high or too low by reading it below or above the level of the liquid in the thermometer.

An even better method is to compare your thermometers to one that is known to be correct. Some shops have a laboratory type thermometer against which they check their pocket thermometers.

A laboratory thermometer is too expensive and too liable to breakage to use in ordinary service work. However, it has been individually checked, and some of them can be obtained with the inspector's certificate showing the results of the test of the thermometer against the manufacturer's laboratory standard.

The "work" pocket thermometers are checked against the shop laboratory thermometer at various temperatures by using water at various higher temperatures and brine at the lower temperatures below freezing.

(Many shops also keep a high quality "master" gauge against which they periodically test their ordinary, inexpensive gauges that they use in service work. This "master" gauge is *never* used on machines, either in the shop or in the field, but is used only to test other gauges. If necessary, the "master" gauge can be sent back to its manufacturer for a recheck occasionally.)

ATTACHING THE THERMOMETER

Every service engineer should keep thermometer clamps, clips, chains, or other means of attaching thermometers to line or other parts of the equipment. These may be bought at any refrigeration supply wholesalers, and can be worth their weight in gold, if properly used.

The thermometer should be secured to the tubing, pipe, or other part tightly enough to insure good heat transfer and quick response by the thermometer to temperature changes.

On evaporators below freezing, scrape away ice or frost, when attaching the thermometer; otherwise the thermometer may read several degrees higher than the refrigerant temperature inside the tube.

It is important that the *bulb* should be in good contact with the surface whose temperature the thermometer is to indicate.

Motor men often attach a thermometer to a motor frame with putty, and this same means may be used with refrigeration equipment, such as compressor crankcases, or heads, condensers, pump housings, control bodies, etc. (Motor men often use Centigrade thermometers, so that they do not have to transpose the thermometer readings from Fahrenheit to Centigrade.)

If the air around the thermometer is very much warmer or cooler than the part to which the thermometer is attached and whose temperature you wish to determine, wrap a piece of dry cloth or dry felt lightly around the tube and thermometer bulb, in order to keep the air from affecting the reading of the thermometer.

(To Be Continued)

Romney 'Scholarships' To Send 10 to NARDA Management Institute

DETROIT — Ten Kelvinator dealers will attend the 1959 NARDA Institute of Management under the annual "George Romney Scholarships" announced by Walter Jeffrey, Kelvinator vice president.

The scholarships, which include all expenses for the week-long management program in Washington, D. C., will be awarded annually to dealers who "contribute most to raising the stature of appliance selling in their communities during the January-July period of this year," Jeffrey said.

The scholarships were named in honor of George Romney, president of American Motors Corp., parent to Kelvinator.

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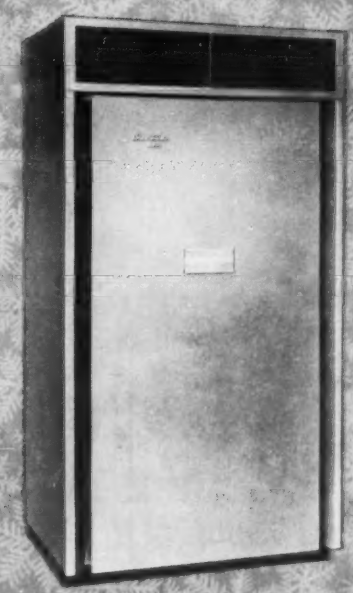

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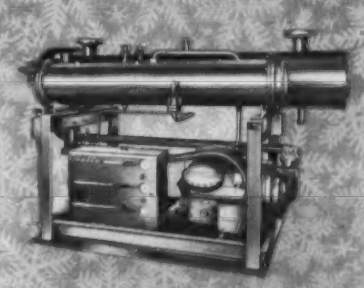
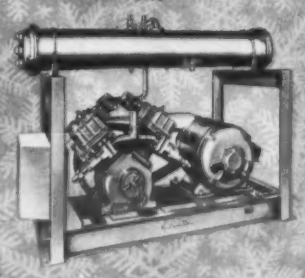
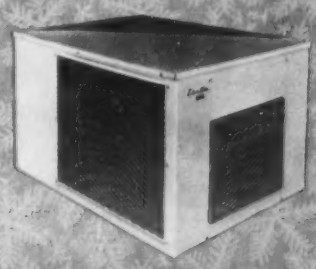


PACKAGED LIQUID CHILLERS 7½ TO 100 TONS WITH SEMI-HERMETIC COMPRESSORS



CONDENSING UNITS UP TO 100 TONS—F-12 OR F-22



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REFRIGERATION DIVISION
OUR 105th YEAR

WRITE DEPT. 1, ST. LOUIS 20, MISSOURI

Air Distribution Requirements In Year-Round Air Conditioning

By Frank D. Klein, Chief Engineer, Governair Corp.

The final important segment of the trio of components necessary to maintaining proper balance in refrigeration cycle is the Evaporator, or cooling coil, whether it be of the direct expansion type or chilled water type.

In the previous text the necessity for maintaining balance between Compressor, Condenser, and Evaporator was pointed out. Selection and investigation in application of the first two has been explained, therefore, the Evaporator or cooling coil remains.

Reference should be made to Part I of the previous text which dealt with The Fundamentals of Conditioned Air and Psychrometry, in order to understand the selection and application of the Evaporator or Cooling Coil in the refrigeration cycle.

At this point reference will be made only to the "dry" or direct expansion Halocarbon refrigerant type subjected to operation with forced air.

GENERAL APPLICATION

Dry, direct expansion type (sometimes referred to as "DX") coils are most common in application because of the popularity of the direct expansion type of system. These are the type coils employed in ducts, self-contained equipment, and in unit air conditioners.

Most generally these fall into the "row-deep" classification, and in the area of comfort conditioning covered by this text, they vary in number of rows from 4 through 8, for all practicability, in increments of 4, 5, 6, 7, and 8, with the 7-row coil being somewhat of a rarity.

They are further classified on the basis of FACE AREA, which is obtained by the length and width of the finned surface. Being of the primary heat transfer surface (tube) and secondary heat transfer surface (plate fin or integral fin) type they are offered with fin spacings from 7 fins per lineal inch to 14 fins per inch for most general practical applications.

Entg. Temp	No. Rows	Face Area Sq. Ft.	Lvg. DB	1000 BTU Air	75° Ent. DB Lvg. DB	75° Ent. DB Sens. %	80° Ent. DB Lvg. DB	80° Ent. DB Sens. %	82° Ent. DB Lvg. DB	82° Ent. DB Sens. %	85° Ent. DB Lvg. DB	85° Ent. DB Sens. %	90° Ent. DB Lvg. DB	90° Ent. DB Sens. %	95° Ent. DB Lvg. DB	95° Ent. DB Sens. %
55°	4	400	52.4	17.6	54.3	58	54.8	62	54.9	66	55.2	70	55.4	74	55.7	78
	4	500	54.2	19.9	56.5	56	56.8	63	57.1	68	57.4	72	57.7	77	58.0	81
	4	600	55.3	22.0	57.2	61	57.6	66	58.0	71	58.4	75	58.7	80	59.1	85
	5	400	50.1	20.2	51.3	57	51.5	61	51.7	65	51.9	69	52.1	72	52.3	76
	5	500	51.5	22.9	53.6	58	53.8	62	54.0	66	54.2	70	54.5	74	54.8	78
	5	600	53.3	25.3	54.8	59	55.0	64	55.2	69	55.4	73	55.7	79	56.0	82
	6	400	47.8	22.9	48.3	57	48.4	60	48.5	64	48.7	67	48.8	71	49.0	75
	6	500	49.3	25.8	50.7	57	50.8	63	50.9	67	51.0	69	51.1	73	51.2	77
	6	600	51.2	28.7	52.4	58	52.5	62	52.6	66	52.7	71	52.7	75	52.8	79
	8	400	44.0	26.0	44.0	55	44.9	58	45.0	61	45.0	65	45.1	68	45.1	71
	8	500	46.3	29.8	46.7	57	46.7	60	46.7	64	46.7	68	46.8	71	46.8	75
	8	600	47.8	33.6	48.3	57	48.3	61	48.3	65	48.3	69	48.4	73	48.4	76
50°	4	400	54.0	15.2	56.7	60	57.0	65	57.3	70	57.6	75	57.8	80	58.1	84
	4	500	56.2	17.1	58.7	61	58.9	67	59.1	72	59.4	78	59.6	83	60.0	88
	4	600	57.2	18.8	59.5	63	60.1	69	60.4	74	60.7	80	61.1	86	61.4	92
	5	400	52.9	17.3	54.4	59	54.6	63	54.8	68	55.0	72	55.2	77	55.4	81
	5	500	54.6	19.4	56.2	61	56.4	66	56.6	71	56.7	76	56.9	81	57.1	86
	5	600	55.7	21.4	57.4	61	57.6	67	57.8	72	58.0	77	58.2	83	58.4	88
	6	400	51.0	19.3	52.0	58	52.1	62	52.2	67	52.3	71	52.5	76	52.8	79
	6	500	52.0	21.8	53.7	60	53.8	65	53.9	70	54.0	74	54.1	79	54.2	84
	6	600	53.7	24.7	55.0	60	55.1	65	55.2	70	55.2	76	55.3	81	55.3	86
	8	400	47.7	22.6	48.0	57	48.0	61	48.0	65	48.1	68	48.1	72	48.2	76
	8	500	49.6	25.8	50.1	58	50.1	63	50.1	67	50.1	71	50.1	75	50.1	79
	8	600	51.0	28.9	51.2	60	51.2	64	51.2	68	51.2	73	51.2	78	51.2	84
60°	4	400	57.0	12.7	59.1	64	59.4	70	59.7	76	59.9	82	60.2	88	60.4	94
	4	500	58.3	14.1	60.6	67	60.8	74	61.0	80	61.2	87	61.3	93	62.0	99
	4	600	59.0	15.6	61.1	70	61.5	77	61.8	83	62.3	90	62.8	96	64.1	99
	5	400	55.7	14.3	57.3	63	57.4	68	57.6	74	57.8	79	57.9	85	58.0	91
	5	500	56.9	16.2	58.8	64	58.9	70	59.1	76	59.2	83	59.4	89	59.5	95
	5	600	57.7	18.1	59.3	67	59.5	73	59.9	79	60.3	85	60.6	91	60.9	97
	6	400	54.1	16.0	55.4	61	55.4	66	55.4	72	55.4	77	55.5	82	55.5	88
	6	500	55.4	18.3	57.0	62	57.0	68	57.0	74	57.0	80	57.0	86	57.0	91
	6	600	56.2	20.6	57.9	64	57.5	71	57.5	77	57.6	83	57.6	89	57.7	95
	8	400	51.1	19.3	51.2	60	51.2	64	51.2	69	51.2	73	51.3	78	51.3	82
	8	500	52.8	21.8	53.3	61	53.3	66	53.3	71	53.3	76	53.4	81	53.4	86
	8	600	53.8	24.5	54.4	62	54.4	67	54.4	73	54.4	78	54.4	83	54.4	89
65°	4	400	59.2	10.2	61.8	69	62.0	76	62.2	84	62.4	91	62.7	99	65.0	99
	4	500	60.2	11.2	63.0	72	63.4	80	63.8	88	64.3	95	64.9	99	67.3	99
	4	600	60.8	12.4	63.7	75	64.3	81	64.9	88	65.5	97	67.0	99	68.9	99
	5	400	58.2	11.4	60.3	67	60.6	74	60.9	80	61.3	86	61.6	92	61.9	99
	5	500	59.1	13.0	61.4	69	61.9	75	62.4	81	63.0	87	63.5	93	64.0	99
	5	600	59.7	14.5	62.1	71	62.8	77	63.3	83	64.3	88	65.0	94	65.7	99
	6	400	57.1	12.7	58.8	65	58.8	72	58.8	78	58.8	85	58.8	92	58.8	99
	6	500	57.9	14.8	59.7	67	59.7	74	59.7	81	59.7	89	59.7	96	60.7	99
	6	600	58.3	16.6	60.3	68	60.3	76	60.3	84	60.3	92	60.3	99	62.4	99
	8	500	54.3	15.9	54.8	63	54.8	68	54.8	74	54.8	79	54.8	85	54.8	90
	8	600	55.7	17.8	56.6	65	56.9	71	56.6	77	56.6	83	56.6	89	56.6	95
	8	600	56.9	19.9	57.9	66	57.9	73	57.9	80	57.9	86	57.9	93	57.9	99

FIG. 59—Chart showing effect of suction pressure variation with 67° entering wet bulb.

The reasons for these variations will be seen in the details that follow.

BASIS FOR HEAT TRANSFER CALCULATION

The previous articles covered the selection of the compressor and condenser for the Heat Transfer Cycle that takes place when air is to be passed over the cooling coil of one temperature and condition to result after passing, in air at a lower temperature and different condition, calculated to provide the means for bringing about the total air condition necessary for the comfort cooling problem involved.

The basic equation for accomplishing this heat transfer through a forced air cooling coil is simply:

$Q = UA\Delta t_m$

Where:

Q is equivalent to the heat transferred from coil surface to refrigerant in B.t.u./hr.

A is equivalent to the total outside coil surface area exposed to the air path, in square feet.

U is equivalent to the overall Heat Transfer Coefficient B.t.u.hr./sq. ft./°F. based on outside surface.

Δt_m is equivalent to the logarithmic means temperature difference between coil surface temperature and refrigerant temperature °F.

HOW A TYPICAL DX COIL IS SELECTED FOR APPLICATION

Each manufacturere has his own method for such selection; all however are predicated on the same basic equation for Heat Transfer. Capacity characteristics are normally the prime factor in selection and at this point it must be remembered from the previous text that such capacity is dependent on **three basic fundamentals:**

1. The quantity of air being passed over (through) the coil.
2. The condition of the air being introduced to the coil as to Dry and Wet Bulb temperatures.
3. The temperature of the refrigerant.

To explain the variable function of these for instance, when temperature differentials between refrigerant and air is increased, or quantity of air is increased, greater capacities of a type can be accomplished. This is so because an increased rate of evaporation of the refrigerant will be possible at the selected time cycle.

On the other hand, when the air quantity or temperature differential between the air and

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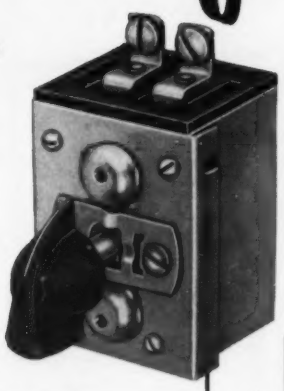

New Wilcolator Type G2 features improved, snap-action switch for higher contact ratings

With its improved, snap-action contact mechanism, the new Wilcolator G2 thermostat offers you much higher contact ratings than have hitherto been available in such a compact unit. Measuring only 2¾ x 1⅝ x 1⅞ in., it nevertheless has ample capacity for heavy duty appliances and medium industrial requirements.

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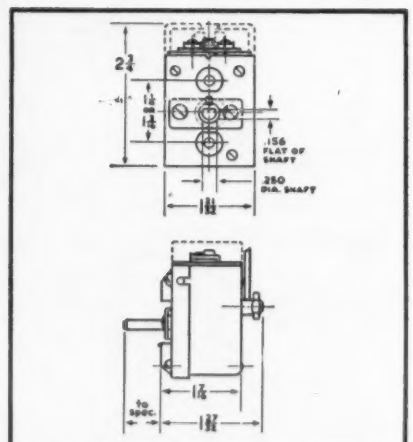

FRONT AND SIDE VIEW TYPE G2 WITH SIDE OUTLET CAPILLARY AND TERMINAL COVER. SCREW TYPE TERMINALS.

SPECIFICATIONS

Standard temperature range: 55°F-95°F

Special temperature ranges: To customer's requirements

Switch mechanism: Single pole, double break, snap action

Motor ratings: 120 to 240 v a-c; running current—14 amp; locked rotor—60 amp

Mounting: Back of panel or in enclosure

Standard shaft: ¼ in. diam. flatted to .156 in.; length to customer's specifications

Terminals: Screw type, AMP or Arkles

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Refg. Temp.	No. Rows	Face Vel. f.p.m.	Lvg. W.B.	1000 BTU	80° Ent. DB Lvg. D.B.	80° Ent. DB Sens. %	82° Ent. DB Lvg. D.B.	82° Ent. DB Sens. %	84° Ent. DB Lvg. D.B.	84° Ent. DB Sens. %	86° Ent. DB Lvg. D.B.	86° Ent. DB Sens. %	88° Ent. DB Lvg. D.B.	88° Ent. DB Sens. %	90° Ent. DB Lvg. D.B.	90° Ent. DB Sens. %
35°	4	400	53.8	19.3	55.5	55	55.8	55	56.1	52	56.3	46	56.6	70	56.9	74
	4	500	56.7	21.5	57.7	54	58.0	60	58.4	64	58.7	69	59.1	73	59.4	77
	4	600	58.8	23.8	59.2	57	59.5	61	60.0	65	60.5	69	60.9	74	61.3	79
	5	400	51.2	22.0	52.3	54	52.5	59	52.7	61	53.0	66	53.2	69	53.6	73
	5	500	53.4	24.7	54.1	55	54.5	59	55.2	63	55.4	67	55.7	71	55.9	75
	5	600	54.7	27.4	55.4	56	56.7	60	57.0	64	57.2	68	57.5	72	57.8	76
	6	400	48.8	24.8	49.1	54	49.3	57	49.4	60	49.6	63	49.7	67	49.8	70
	6	500	50.8	28.0	51.2	54	51.3	58	51.5	62	51.7	66	51.8	69	52.0	73
	6	600	52.6	31.0	53.5	55	53.6	59	53.8	63	53.9	67	54.1	71	54.2	75
	8	400	44.6	28.2	44.9	54	44.9	57	45.0	60	45.0	63	45.1	66	45.1	69
	8	500	46.3	32.5	47.4	54	47.5	57	47.6	60	47.8	63	47.9	67	48.0	70
	8	600	48.0	36.4	48.6	56	48.8	57	50.0	61	50.2	64	50.4	67	50.6	70
40°	4	400	56.1	16.7	58.0	57	58.3	61	58.6	66	58.9	70	59.2	74	59.5	79
	4	500	57.7	19.7	59.5	59	59.9	64	60.3	68	60.7	73	61.4	77	61.9	81
	4	600	58.8	20.8	61.1	61	61.5	66	62.0	70	62.5	74	62.9	79	63.4	84
	5	400	54.0	19.1	55.2	56	55.4	60	55.6	64	55.9	69	56.0	72	56.2	76
	5	500	55.7	21.5	56.8	58	57.1	63	57.4	67	57.7	71	58.0	75	58.3	80
	5	600	57.0	23.6	58.0	58	58.0	63	58.4	68	58.7	72	60.1	77	60.4	81
	6	400	51.8	21.5	52.4	55	52.5	58	52.6	62	52.6	67	52.7	71	52.8	75
	6	500	53.6	24.4	54.1	57	54.2	62	54.3	66	54.5	70	54.6	74	54.7	78
	6	600	55.1	26.8	56.3	57	56.5	62	56.7	66	56.9	70	57.1	74	57.3	79
	8	400	48.3	24.8	48.6	54	48.7	58	48.8	61	48.8	65	48.9	68	49.0	71
	8	500	50.6	28.2	50.9	56	51.0	58	51.1	63	51.1	67	51.2	70	51.3	74
	8	600	52.2	31.5	52.5	57	52.6	60	52.6	65	52.7	68	52.7	72	52.8	77
45°	4	400	58.4	14.1	60.1	60	60.5	66	61.0	70	61.3	75	61.7	81	62.0	86
	4	500	59.7	15.7	61.9	63	62.2	68	62.5	74	62.9	79	63.4	85	63.8	90
	4	600	60.6	17.3	62.9	64	63.5	68	64.0	73	64.4	81	64.9	87	65.4	92
	5	400	56.7	16.1	57.9	59	58.1	64	58.3	69	58.5	74	58.7	79	58.9	83
	5	500	58.0	18.2	59.9	61	59.8	66	60.0	71	60.3	76	60.5	82	60.7	87
	5	600	59.1	19.9	60.8	63	61.1	68	61.5	73	61.8	79	62.2	84	62.5	90
	6	400	54.8	18.2	55.5	58	55.6	62	55.8	67	55.9	72	56.1	77	56.2	81
	6	500	56.2	20.8	57.4	60	57.5	65	57.6	69	57.8	74	57.9	79	57.9	84
	6	600	57.4	22.6	58.6	61	58.8	67	59.0	72	59.2	77	59.4	82	59.6	87
	8	400	51.9	21.3	52.2	56	52.2	60	52.3	64	52.3	69	52.4	73	52.4	78
	8	500	53.7	24.4	54.1	58	54.1	63	54.2	68	54.2	73	54.2	78	54.3	83
	8	600	55.0	27.0	55.6	59	55.7	63	55.7	68	55.8	72	55.8	77	55.9	82
50°	4	400	60.5	11.5	62.7	65	63.1	71	63.5	77	63.8	83	64.2	89	64.6	95
	4	500	62.0	12.1	64.3	70	65.5	76	66.0	82	66.5	87	67.1	93	67.8	98
	4	600	62.3	14.0	64.5	72	65.7	79	66.3	84	67.0	88	67.6	94	68.2	99
	5	400	59.2	13.2	60.6	63	60.9	69	61.1	75	61.3	81	61.6	86	61.8	92
	5	500	60.5	14.4	62.3	66	62.7	73	63.1	78	63.5	84	63.9	90	64.3	95
	5	600	61.7	16.3	63.0	68	63.5	74	64.0	80	64.5	85	64.9	91	65.4	96
	6	400	57.7	15.3	58.8	61	58.9	68	58.7	73	58.8	79	58.9	84	59.0	90
	6	500	59.0	16.7	60.2	64	60.4	70	60.5	76	60.6	82	60.7	88	60.8	94
	6	600	59.2	18.7	61.3	66	61.3	72	61.5	78	61.8	84	62.1	90	62.3	96
	8	400	55.1	17.5	55.5	60	55.5	65	55.5	71	55.6	77	55.7	83	55.8	89
	8	500	56.1	20.1	57.2	61	57.2	66	57.4	71	57.5	76	57.6	81	57.7	86
	8	600	57.8	22.1	58.4	63	58.4	68	58.6	74	58.8	79	58.9	84	58.4	89

RATINGS BASED ON 1000 PER SQUARE FOOT

FIG. 59-A—Chart showing effect of suction pressure variation with 69° entering wet bulb.

refrigerant are decreased, this same rate of evaporation in the given time cycle will decrease.

Returning to the recent text on the compressor, at the same speed of rotation when the rate of evaporation is increased, increased gas results, which will in turn raise the suction pressure. Conversely when the rate is decreased the suction pressure will be lowered.

The effect of this Suction Pressure variation can be seen from the charts in Figs. 59 and 59-A where a group of DX Coil ratings are given at two separate Entering Wet Bulb conditions.

For example, take a 5-row coil, at 67° F. Entering Wet Bulb, 40° F. Refrigerant Temperature, 500 f.p.m. Face Velocity and compare the same coil under the same Entering Wet Bulb condition at 35° F. and 45° F. refrigerant temperature.

Basically we know that:

(1) When the Suction Pressure increases the capacity of the coil is lowered due to the decrease in temperature differential between the refrigerant and the air.

(2) When the suction pressure decreases, the capacity of the coil increases.

(3) By referring to the previous text on the compressor the foregoing is effective in (a) increasing the capacity of the compressor when the suction pressure is increased, because the density of the gas is increased, thus making it possible to pump more refrigerant per stroke, on the other hand (b) decreasing the capacity of the compressor when the suction pressure is decreased.

The information outlined above is now more specific in illustrating the need for balance between the compressor, the condenser—which is a governing factor on the compressor—and the evaporator.

(To Be Continued)

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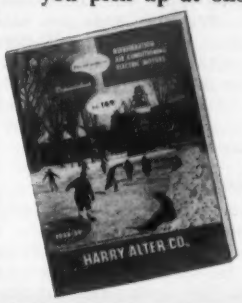

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Developing Military Standardization (3)

Editor's Note: This is the third instalment of a paper prepared by Sterling Smith of Consultants, Inc. describing the thinking and concepts involved in developing a program of military standardization for refrigeration and air conditioning equipment. Smith is technical director for the standardization project.

What has gone before in this paper was deliberately entitled "precis" to permit a look at the program by those who must read and run. We also hope we have succeeded in explaining some difficult so-called intangible ideas to show that they are really tangible.

What follows will be of interest to those directly responsible for a standardization project.

Historical Analysis

In modern War, to "kill" equipment and industrial capacity is just as important as "killing" people. In fact, many strategists say that the destruction of machines must precede the destruction of personnel in a major conflict. It even follows that if equipment and capacity to produce are destroyed, then the destruction of personnel may not be necessary except as it is incidental to the destruction of mechanical fighting power.

In any event, it seems clear that that contestant who emerges with the least loss of machines and all the other items in the logistic chain back to the machine tool or to concentrated food, will surely be "victorious" in an extensive or big war.

An over-simplification? Perhaps. But even if we seem here to place too much emphasis on machine power as the fundamental, we are certainly correct when we say that it is more than ever important. It will be a foolhardy leader indeed who masses his men in a future conflict.

On the contrary, he will seek mass power through the overwhelming might of the machine, and he will disperse men as thinly as possible behind the machine. [So has war-making evolved, is evolving.] Even dispersion, in the usual sense, is difficult under the impact of nuclear destruction, an impact so intense that one is moved to say that man is psychotic indeed if ever such war occurs.

Yet there may be at large a psychotic or psychotics; we are driven to cope with the danger—insane though someone or ones may be. Obviously, the first requirement is ability to produce the killing machines, whether they are designed to "kill" machines or people.

The old anecdote of "for the lack of a nail, the shoe was lost, and for the lack of the shoe, the horse was lost, and for the lack of the horse, the man was lost, and for lack of the man, the battle was lost, and for the loss of the battle the war was lost," is no longer appropriate. Today you can start with the loss of a machine tool and end with the loss of the sources of supply and weapons.

Increasing Sources Of Supply

In this paper, sources of supply is fundamentally the topic. The sources of supply have been and are being increased beyond theories contemplated only a few years ago.

The devastation of one or even several industrial areas cannot be permitted to stop production of the necessary machines. Therefore, to jump abruptly to a primary conclusion, many widely separated industrial areas must be capable of producing a **STANDARDIZED item or system.** The fact of component interchangeability in military equipment must be extended far beyond what we have previously imagined.

So, as we now proceed to a prosaic account of the recent history of Standardization, let us not lose sight of key targets. The simple incentive toward Standardization may well be economic and common-sensical, which is the way most things start, but let us now see that the language of Congressional and Administrative action in this immensely complicated field has a **strategic** base of intrinsic significance to any major military effort.

History should make clear to us that we are not talking about standardization of waste paper baskets, important as such a detail may be in a maze of detail, but about standardization as a key device in war.

We will at this point briefly review the history of, basis for, and objectives of the Department of Defense standardization program since some background is necessary to evaluate the objective of

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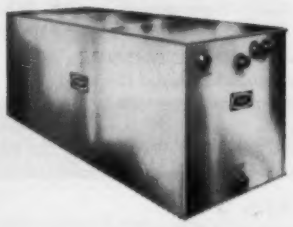

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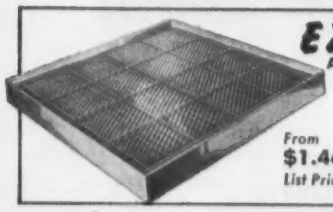

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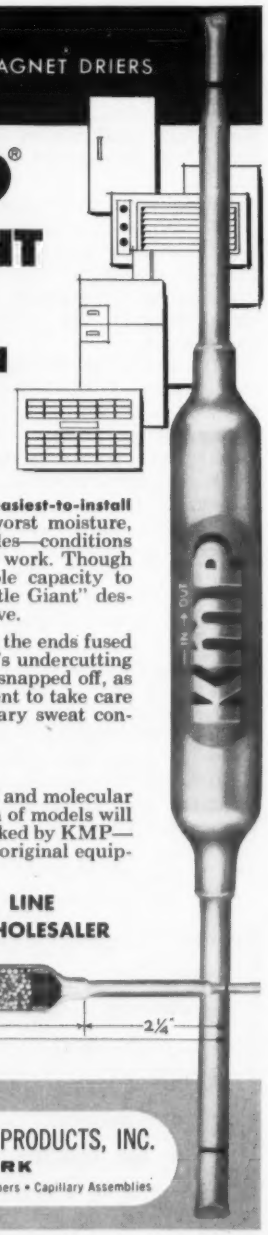

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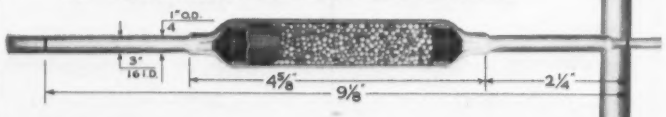

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this paper in relation to the overall. We will also attempt to point up the fundamental difference between the "system approach" to standardization, which is based upon engineering analytical techniques, and the "catalog item approach" based upon bookkeeping analytical techniques.

The first deals with basic engineering design and functional and dimensional characteristics, while the second deals with a literary description of the item which may or may not include dimensional characteristics.

At the conclusion of World War II, the military supply system was glutted with a variety of over 12,000,000 items of equipment scattered throughout the world. There was no central inventory control, nor was there any uniform pattern whereby these items could be either identified or evaluated. While a part of this great mass of material had to be abandoned in the field, a substantial portion was returned to depots for further disposition and salvage.

Supply lines were engulfed in a flood of equipment requiring rehabilitation and repair. In many instances huge quantities of equipment were scrapped because replacement parts could not be obtained either from the manufacturer or from cannibalization of other similar equipment.

Many manufacturers had discontinued the production of military models and the components of the existing military models lacked interchangeability, thus preventing effective salvage. In addition, the rate of obsolescence made the cost of obtaining limited numbers of replacement parts uneconomical over a period of time.

Standardization would not have prevented obsolescence, but if it had existed so that components were interchangeable in such equipment, cannibalization would have been possible.

While these items had been purchased originally under a heterogeneous assortment of purchase descriptions, specifications, instructions, and arrangements promulgated by the various military agencies during emergency periods, even under these conditions the Armed Services had made many earnest efforts to establish standards and to eliminate duplication wherever possible.

For example, JAN, AN, and FED specifications were developed particularly in the procurement of basic materials and in the field of packaging and marking shipments. However, the pressure of the times did not permit a coordinated management program.

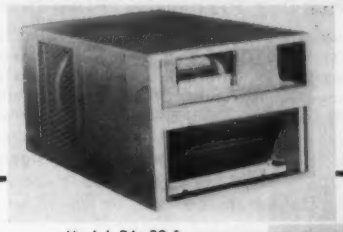
The terrific losses in materiel, delays in delivery, and frustrations in field operations, resulting therefrom, led the top policy levels in the Military Establishment as well as certain leaders in Congress to establish directives, based on statutory authority, for the greater centralization and simplification of the military supply system.

Based on the National Security Act of 1947, the 80th Congress enacted Public Law 413 and the 81st Congress passed Public Law 152 providing for the establishment of a Federal Catalog of Supplies with Coordinated Military Specification in order to effect the standardization of military equipment to the greatest extent feasible.

In July, 1952, the 82nd Congress enacted Public Law 436, which placed even greater emphasis on these problems, and instructed the Secretary of Defense to establish a unified system of cataloging, coordinated with the General Services Administration and the National Security Agency, and to undertake a permanent system of standardizing supplies and equipment coordinated with industrial practices and capacities.

Public Law 1028, passed by the 84th Congress, further implemented these programs and re-emphasized the public interest in the integration of the entire military supply system with commercial and industrial potentials. Section 2452, paragraph 4, of this Law, states: "The Secretary of Defense shall maintain liaison with **industry advisory groups** to coordinate the development of the supply catalog and the standardization program with the best practices of industry and to obtain the fullest practicable cooperation and participation of industry in developing the supply catalog and the standardization program."

(To Be Continued)



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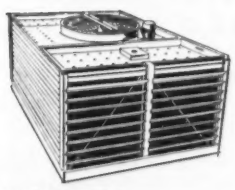

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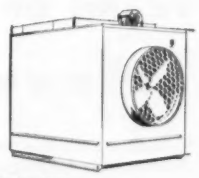

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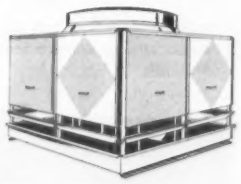

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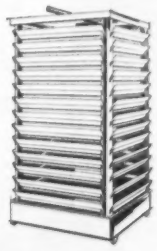

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Dept. Store Features Heating, Cooling Plants In Penthouse

FORT WAYNE, Ind.—Among features of the new multi-million dollar Wolf & Dessauer department store here are air conditioning and heating plants located in a penthouse on the roof.

This arrangement is said to save valuable merchandising space in the interior of the store.

The boiler room on the roof not only saves selling room on other floors but was less expensive to install, it was pointed out. The smokestack, for instance, starts on the roof instead of cutting through the entire four stories of the structure.

Two giant tanks, submerged under the lower level, will pump oil to the roof for use in the heating plant. Each tank has a capacity of 20,000 gals.

The store's 700-ton air conditioning plant is a Carrier installation.

The building was designed by A. Epstein & Sons, Chicago architect; Hagerman Construction Co. of Fort Wayne was the general contractor; and Allen H. Dahme Associates of Comstock Park, Mich., planned the interior design and decorations.

Allied Supply of Dayton To Move To New Location

DAYTON—Allied Supply Co., Inc., wholesaler of air conditioning, refrigeration, and electronic supplies, will be open in its new location at 1100 E. Monument Ave. here.

The space which Allied will use for its operations in the new location will be more than double that in the former quarters, state Jack and Bill Homan, who operate the wholesaling firm. The new location is one mile east of the downtown Dayton area.

An open house celebrating the firm's locating in the new quarters is planned for April 17. Visitors will see some new ideas in "uniform" dress for wholesale house employes, and a new type of revolving display.

Trane Names Galloway

LA CROSSE, Wis. — The Trane Co. has announced the appointment of Robert L. Galloway to plant manager of the firm's new $1.5 million factory which manufactures residential heating and air conditioning products in Clarksville, Tenn.

Galloway was formerly manager of the firm's production control department in La Crosse, a position he held since 1953, according to the announcement.

Submits Low Post Office Bid

HUNTSVILLE, Ala. — Miller Electric Co., a local contractor, submitted the lowest of three bids for installing air conditioning equipment at the Huntsville Post Office, it has been announced recently.

A spokesman said the Miller concern submitted a bid of $133,044.

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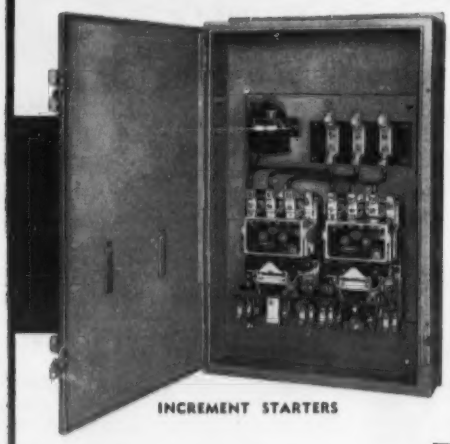

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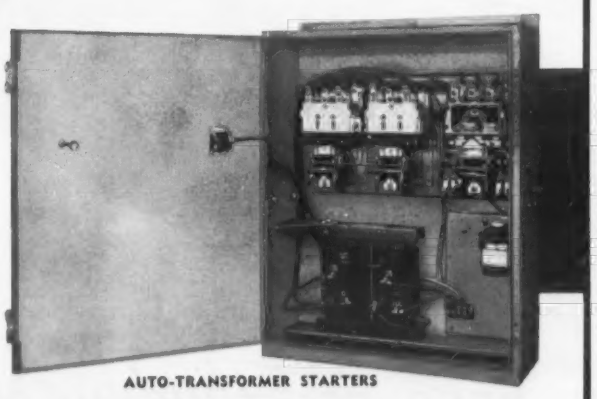

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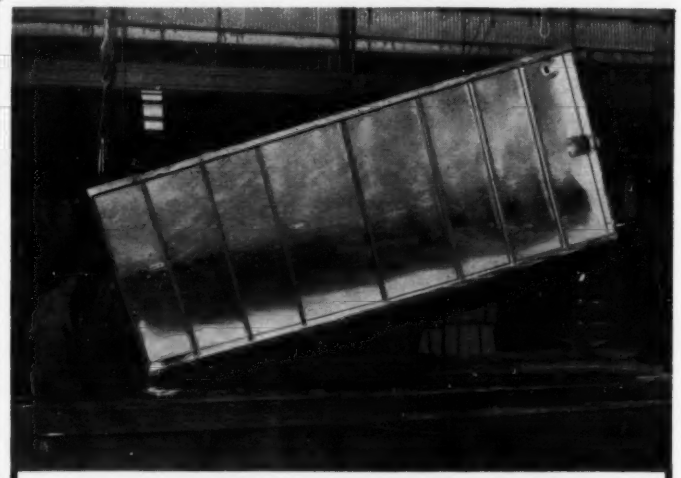

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Heat Pump In the North?--

(Continued from Page 1, Col. 3)

the whole picture," contends one authority in the East.

"Manufacturers install these things in our area," frets a utility, "then leave the rather extensive service problems to us, for the simple reason that the distributor hasn't enough qualified men to keep up with the service."

"These things are just not yet refined enough to be practical and reasonable 100-150 miles north of traditional heat pump territory," judges a Columbus, Ohio, source.

Depending on location and past experience, the heat pump dispute ponders one or more of three factors: installation cost, operating cost, service cost. While a few question the ability of the heat pump to heat during typical northern winters, others admit that it can handle the operation—but not competitively.

Restricting the discussion to central heat pumps, the cost of installation varies with the type of unit (self-contained, split, air- or water-source), with necessary insulation, ductwork, piping, perhaps wiring. Such variables account for the fact that the total installation cost of identical units may differ by several hundred dollars.

Some Firms Restrict Heat Pumps to South

Recognizing these variations, some companies have chosen to restrict their heat pump activities to the South and West where mass produced units may reasonably be expected to perform properly.

Westinghouse, for example, acknowledges that an air-to-air heat pump designed for application in both North and South requires large indoor and outdoor coils, blow-through instead of induced draft fan circuits. In southern areas where extreme cold weather efficiency is not required, such heavy-duty design features are unnecessary and "penalize the regional purchaser."

Contrariwise, units built for the South do not perform satisfactorily or economically north of the 38th.

Power Cost Important

Operating cost is, of course, influenced by insulation. But of more importance is the cost of power. Authorities generally agree that unless electricity is available at less than 1.7 cents per kwh. heat pumps are prohibitively costly to operate where heating is a major portion of the year's load.

In practice, this is anywhere that winter temperatures frequently drop below 35°. In such cases, most heat pump assemblies call for supplemental resistance heat. Resistance heat, to make the heat pump economically feasible in most areas, should not be called for more than 10% of the entire heating season, most industry authorities agree.

There are heat pumps operating at low winter temperatures. The question in many cases is not the ability of the unit to do the heating job, but the cost of its doing so. "A heat pump built for the southern market and installed in the North will use entirely too much resistance heat," remarks a Cincinnati contractor.

Service Is a Thorny Topic

The subject of heat pump service is a thorny one for all involved, the manufacturer, his distributor, the power company, the customer.

There are distributors who have experienced extremely few service problems with heat pumps; there are others who have been replacing compressors or correcting major defects from the first month of use.

Some feel that most of the failures occur during the heating season; several major firms report exactly the opposite.

A disproportionate number of service problems prevail in the North, many feel, and it is from the northern cities that some utility companies complain that the manufacturer, by default, throws the burden of servicing consumers on the utility. The scarcity of servicemen qualified to deal with heat pumps adds to the problem.

A Midwestern authority sharply criticizes what he calls "synthetic comparison figures" which purport to show supposed price and operating cost advantages for heat pumps over conventional heating.

"None but the naive or illiterate can fail to detect the unreliability of some of these misleading comparisons," he argues.

"The relatively new development of installing heat pumps by the hundreds in tract housing will be a good test of the readiness of these units to invade the North," offers a Chicago executive. "We expect service costs to be high at first, but the experience should be invaluable to manufacturers and power companies both.

"We can only hope that the heat pump installations are designed and installed with more care than is typical of tract housing heating systems," he offered.

Showing Gains In North

Countering all these objections is the undeniable fact that heat pump sales are increasing rapidly. Chiefly in the South, to be sure, but showing definite gains in the North.

Even in those areas where initial and operating costs are higher than competitive heating and cooling, heat pumps are making inroads by appealing to pride of ownership, by selling benefits like "clean, safe, no screens or open windows, single unit for heating and cooling."

Salesmen are recognizing that they must sell the cooling as well as the heating performance of the heat pump. While there is no longer any serious doubt that a properly designed and installed heat pump can handle severe heating tasks, the fact is that the heat pump is not competitive on a single service. It will be purchased by people who also want cooling—who would otherwise be willing to buy central cooling for their homes.

Viewpoint from All Parallels

The foregoing discussion provides background against which to evaluate the following remarks from heating and cooling authorities around the country.

LOS ANGELES—"With over 1,500 residential installations, we have the experience to predict confidently that heat pumps will continue to grow here. In metropolitan L.A., we have three design temperatures—coastal, valley, and 'in-between.' As a result, we find ourselves using self-contained, remote, and window-type units with no preferential trend discernible."

SEATTLE—"Only 5% of our days ever exceed 75°; we have no need for cooling—this factor cutting out the use of a heat pump. I doubt if there are more than 50 heat pumps in the Puget Sound area. While a couple of manufacturers are trying to push their units here, most are standing by."

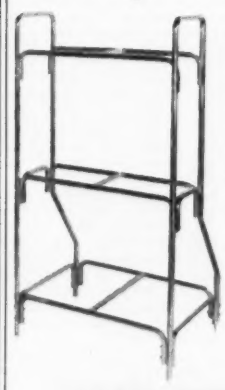
PHOENIX, Ariz. — "Over

(Concluded on Back Page, Col. 1)

A **Must** for Sales
A **Necessity** for Service

101 TW
$9.90
Shpg. wt. 7½ lbs. (2 per ctn.)
Casters $1.75 Extra

202 TW
$13.90
Shpg. wt. 9 lbs. (1 per ctn.)



303 TW
$19.95
Shpg. wt. 19 lbs. (1 per ctn.)

ROOM UNIT DISPLAY STANDS

Made of light but strong Aluminum Tubing — highly polished

A bright clean stand lasting for years . . . a real bargain

Orders Shipped C.O.D.
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Quantity Discount On 100 or More Units

NATIONAL MFG. CO.
1782 Person
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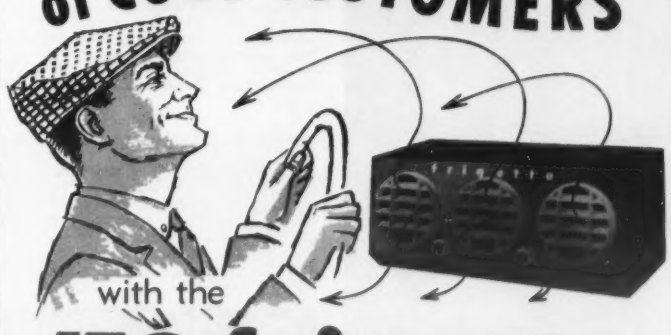
WE CHOSE ALCOA ALUMINUM MILL PRODUCTS

You'll Sell CARLOADS of COOL CUSTOMERS



with the
'59 frigette
AUTO AIR CONDITIONER

New? Not really.
The Frigette case is striking in appearance . . . is only 6¼ inches high . . . has appealing convenience features. And inside there's nothing **really** new—at least not "suddenly" new.

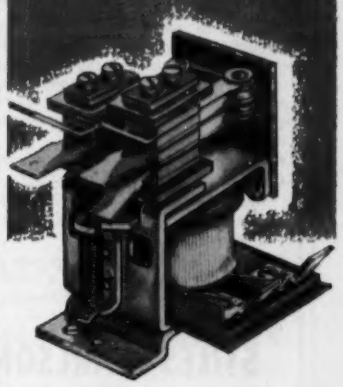
We've simply improved the inside component parts to such an extent each year that we now believe our unit is a model for the industry. Within the top five in sales, the completely automatic Frigette has been time-tested in the field by thousands of motorists. If you'd like to sell a sure thing instead of an experimental model—and if you'd like to sell a refrigerated auto air conditioner that's engineered to a standard, not a price—let us hear from you.

On request, complete information will be mailed to prospective distributors and dealers.

Write Dept. J

FRIGIQUIP CORPORATION P. O. Box 7205, Oklahoma City, Okla.

RBM



...with the 98000 Series A.C. or D.C. General Purpose Relays

The basic relay with numerous contact forms, ratings and terminal variations is in regular production. RBM has "CUSTOMER-ized" this type of relay to fit almost every conceivable requirement. This vast background of application engineering can serve you with design short-cuts . . . lower your "finished product" cost.

Standard versions approved under U/L file Nos. E12139 or E22381.

FEATURES: Pressfit pile-up eliminates drift; assures contact stability . . . Dependable cross-bar contacts available for low voltage and/or low current circuits. 6 or 15 amp contacts available for power circuits. Simplified magnet frame and armature assembly for efficient, positive action. Variety of mountings. Also available in 97000 Series providing added coil power and greater sensitivity.

A. C.	Specifications	D. C.
98700 type		98600 type
230 AC	Max. Coil Voltage	115 DC
	Max. Coil Res. in OHMS.	20000
9.0 VA IN-RUSH 6.5 VA SEALED	Max. Coil Watts or Volt Amps	4.0 Watts
2 PDT 15 amps. 4 PDT 6 amps. 6 PDT 3 amps.	Max. Contact form with rated current at 32 V. DC or 115 V. AC (non-inductive load)	2 PDT 15 amps. 4 PDT 6 amps 6 PDT 3 amps.

Consult your RBM Application Engineer or write for Bulletin 1060.

RBM CONTROLS DIVISION
ESSEX WIRE CORPORATION
Logansport, Indiana

Factories Located At Peru, North Manchester and Logansport, Indiana

Patents

Patents have been omitted from this issued to allow for publication of as much information on Air Conditioning as possible in this Air Conditioning "Show Case" issue.

Cambridge Corp. Merged Into Parent Co.

SYRACUSE, N. Y. — Cambridge Corp., Lowell, Mass., a wholly-owned subsidiary of Carrier Corp., was merged into the parent company effective Feb. 27.

On that date it became a division to be known as Cambridge Co.

Cloud Wampler, chairman of the board of Carrier, stated that operations will remain at Lowell and that John W. Logan will continue as chief executive officer.

The new division is being created to effect closer integration of all phases of Cambridge operations with those of the many other divisions, according to Wampler.

Cambridge designs and manufactures equipment for the storage and transportation of liquefied gases at low temperatures, it was noted.

St. Louis Has 6,100 Cooled Hotel Rooms

ST. LOUIS—St. Louis hotels, which more than two decades ago "blazed the air conditioning trail for the nation," now have in excess of 6,100 air conditioned rooms as result of additions which were effected throughout the year, according to figures compiled by John K. Bryan, executive vice president of the Hotel Association of St. Louis.

Bryan said, in his report, that this is a larger percentage of air conditioned hotel rooms than in any other city, regardless of size.

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HEATING—COOLING
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Your own copy. Any Color Ink on white or yellow background. Paraffin coated cardboard.

Size	100	250	500
20"x14"	$36.00	$50.00	$70.00
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ORDER NOW!
Send sketch on letterhead.
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Lowest Cost — Highest Efficiency in Water Conditioning

The **KARLSON** *Automatic* **WATER CONDITIONER**

Eliminates Clogging, Corrosion and Scale Deposits in Pipes and Equipment

Here is the simplest and lowest cost method of eliminating all those harmful and damaging elements that cause corrosion and clogging of pipes and equipment, in ice cubers, cooling towers, evaporative condensers, coffee makers, urns, etc.

- Does not raise or lower pH in water.
- Prevents the precipitation of calcium and magnesium salts in water by forming soluble complexes with these elements.
- The calcium and magnesium ions in water are held so firmly in a soluble chemical combination that they will not react with any greases or oils.
- It also forms inert complexes with certain metallic ions in water such as; iron, copper, nickel, manganese and zinc.
- Harmless to all metals, prevents corrosion and pitting of metals in zeolite soft water.
- Reduces surface tension as a wetting agent.
- Harmless to septic tanks. No organic sludge build-up—no odors.
- Easy to install—only infrequent replacement of cartridge is required.

Request full information immediately.
(A few exclusive territories still open)

STILES-KARLSONITE CORPORATION
1552 Grand Avenue, Waukegan, Illinois
WATER CONDITIONING COMPOUNDS AND EQUIPMENT

NOW.. FROM *REMCO* MOLECULAR SIEVE FILTER-DRIERS with DEPTH FILTRATION

Utilizing advanced design Molecular Sieve cartridges, these new Remco Filter-Driers combine unequalled drying efficiency, effective acid removal, generous flow capacity and *depth* filtration.

The massive depth filter completely removes all scale, sludge, carbon and other particles as small as 100 microns. Molecular Sieves adsorb and retain large quantities of moisture even at refrigerant temperatures of 140F, and keep moisture concentrations below 10 ppm. Acids are reduced far below dangerous corrosion limits.

Compact in size, the filter-driers are U/L Approved and may be used for Refrigerants 12 or 22, Carrene or methyl chloride. Working pressure is 500 psi; minimum bursting pressure, 2500 psi.

REPLACEABLE CARTRIDGE TYPE units use an "O" ring for a positive, leakproof flange seal. From 3 to 40 tons, with ⅜" thru 1⅝" sweat connections.

SEALED TYPE filter-driers are available in 1 to 12 tons, with ¼" thru ⅝" flare and ⅜" thru ⅞" sweat connections.

"T" FITTING TYPE in 2 to 6 tons, are readily adaptable to systems using conventional "T" driers.

Remco Molecular Sieve Filter-Driers are available at leading wholesalers. Ask your wholesaler for more information, or write for Bulletin MS-1. Remco, Inc., Zelienople, Pa.

REMCO
MANUFACTURERS OF ADVANCED REFRIGERATION PRODUCTS
Filter-Driers • Liquid Indicators • Receiver-Driers • Check Valves • Safety Devices • Frost-Tite Flare Nuts

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

PACKAGE HEAT pump and air conditioning product design and development engineer desires to make a change. Experience includes setting up and operating an engineering department with lab for testing and rating equipment in accordance with ARI Standards. A reliable low-cost product is an engineering challenge for today's market. BOX A6209, Air Conditioning, Heating & Refrigeration News.

ATTENTION MANUFACTURERS: District manager, 36 years old desires connection with air conditioning or refrigeration or heating manufacturer to cover the Philadelphia area. Nine years' experience in sale and application of refrigeration, air conditioning & heating equipment. Complete knowledge of all phases of distribution. Proven sales record. Available immediately. BOX A6205, Air Conditioning, Heating & Refrigeration News.

COST REDUCE your product without sacrificing reliability and performance. A package refrigerating system specialist, air handling and controls engineer, would like to increase your profit position. Experienced in operating a design engineering department, or managing a small plant manufacturing heating, refrigerating, and/or air conditioning equipment. BOX A6211, Air Conditioning, Heating & Refrigeration News.

A PROGRESSIVE refrigerating equipment senior design engineer desires new opportunity. Experienced in the development of commercial and residential package heating and cooling equipment—from design conception to the finished product—with today's low cost product requirement. BOX A6210, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

MAINTENANCE & installation supervisor qualified by education and experience to supervise refrigeration, mechanical, general maintenance, market installations and construction detail for independent supermarket chain. Should have engineering education plus experience in above lines. Salary commensurate with qualifications. Write giving full information including past earnings and general salary expectations to GENETTI'S SAV-WAY MARKETS, Hazleton, Pennsylvania.

DEALERS WANTED for a complete line of chip ice makers—3 to 20 ton. Also 3 ton capacity self-contained air cooled chip ice makers. Give details, stating area covered, lines handled, and resume of company. Reply Kent division of JOHN MOHR & SONS, 3200 E. 96th Street, Chicago, Ill.

WE NEED the full time services of a capable experienced take-off man and cost estimator for a complete line of air conditioning, heating and ventilation products. Prefer mature middle aged man with background of cost estimating in mechanical contractor's office. If interested, write McMURRY & CO. OF MIAMI, 33 N. E. 6th Street, Miami, Florida with full details, qualifications and personal data. Salary open.

REFRIGERATION ENGINEER for product engineering section of small L. I., New York company. Prefer man with experience as product or production engineer of packaged industrial products including refrigeration and compressed air. Resume and salary requirements to BOX 244, Massapequa, New York.

ENGINEER REFRIGERATION Controls—To head a department on design and development of commercial refrigeration control valves of all types; national corporation with midwestern manufacturing and engineering facility; salary and bonus commensurate with work background and ability. Send full details, qualifications and personal data, to BOX A6172, Air Conditioning, Heating & Refrigeration News.

MANUFACTURER'S AGENTS for a complete line of air and water-cooled central air conditioning equipment, both commercial and residential. Desire agents already established in heating and air conditioning, calling on wholesalers and OEM accounts. Give details in first letter stating area covered and other lines handled. BOX A6177, Air Conditioning, Heating & Refrigeration News.

WANTED EXPERIENCED refrigeration service man. York distributor has an opening for a service mechanic who can qualify for work on both packaged and central systems up to 100 tons. This is an opportunity to locate in one of the fastest growing cities of the Southwest. Write qualifications to BOX A6197, Air Conditioning, Heating & Refrigeration News.

DEVELOPMENT ENGINEER. Attractive position open for experienced engineer of residential split systems, package units and/or heat pumps. Also interested in engineer experienced in design of commercial air cooled air conditioning equipment. All replies given prompt, confidential attention. Salary open; location, Michigan. Reply BOX A6201, Air Conditioning, Heating & Refrigeration News.

SALES ENGINEER—college degree in air conditioning and refrigeration, between 30 and 40 years of age, who has had experience calling on contractors and engineers. Growing midwest manufacturer of compressors, condensing units, full line of chillers 10 to 300 tons, and cooling towers. Duties require working with manufacturers' agents who sell direct to all contractors, requiring substantial travel. Give full details of education, experience, jobs held with salaries-references, minimum salary required in letter of application to BOX A6203, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION AND air conditioning installation and maintenance man. Preferably one familiar with Carrier equipment. Must be able to install and maintain both applied and package equipment up to 100 tons. Year round position with vacation. In reply state age, marital status and experience. Write BOX A6206, Air Conditioning, Heating & Refrigeration News.

APPLICATION AND sales engineer, technical graduate or equivalent wanted with refrigeration experience and sales. Age 25-32. Interesting work calling on contractors, wholesalers and air conditioning and refrigeration manufacturers in established territories for nationally known control manufacturer. Starting salary based on experience plus commission after indoctrination. All replies will be kept confidential. Address reply to BOX A6207, Air Conditioning, Heating & Refrigeration News.

MANUFACTURERS' AGENTS: — By substantial manufacturer entering home freezer field on national scale in midsummer. Product will have new features not now available in market. Entire United States open for territorial franchises. BOX A6212, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION AND air conditioning serviceman wanted. Heating background also desirable. Must be completely qualified. We offer year round work, regular wage increases and paid vacations. Located in Ohio. In letter include resume of full experience, a picture of yourself if possible, and references. BOX A6208, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

WANTED: USED 10 or 15 hp. Universal Cooler condensing unit. Call or write REFRIGERATION SALES CO., 945 Campbell Ave., Windsor, Ontario, Canada. Telephone Clearwater 4-6731.

WANTED SURPLUS condensing units with or without motors. Preference given Frigidaire compressors. SOUTH TOWN REFRIGERATION CORP., 8041 South Western Avenue, Chicago 20, Illinois or Phone Prospect 8-1000.

NEW OR used and repairable compressors, condensing units, valve plates, and parts for General Electric, Brunner, Carrier, Worthington, Copelametic, etc. Give Model No., Horsepower and full description. UNITED REFRIGERATION CORPORATION, 514 W. 12th St., Los Angeles 15, Calif.

EQUIPMENT FOR SALE

RECONDITIONED (like new) everything in commercial refrigerated cases. Approx. 50% of original factory cost. All equipment and units guaranteed, crated and shipped anywhere. Write: B.T.U. DIST., 41 Greenwich St., Hempstead, L. I., N. Y.

2 YORK Flakice machines with storage bins: Model Der. 10 — $500. Model Der. 11—$500. 4 Krack coils 12" x 21½" x 43½". 2 fan motors on each. 3 coils 12" x 23" x 24½", 1 fan motor each. 2 banks of 6 cold plates 12 ft. long, 12 inches wide. Par condensing units water cooled, Model #HW30L, low temp. h.p. 5, Model #HA15S, h.p. 1½. 2 Model #HW20L, h.p. 3, Model #P20L, h.p. 5, Banana room, hi temp or med. temp. 5 Butcher Boy doors, 46" x 6'7½". 1 freezer door, 50 x 6'9½". All this for $1500, which includes dismantling and all copper tubing and controls. FOB Jackson, Tennessee. JACKS REFRIGERATION SERVICE, 815 Fairground St., Jackson, Tenn.

FULLY RECONDITIONED compressors and condensing units for refrigeration and air conditioning. All makes 1 to 75 hp. Also coils and condensers. Exceptional buys and outstanding savings. Let us know in detail your needs. UNITED REFRIGERATION CORPORATION, 514 W. 12th St., Los Angeles 15, Calif.

COMPLETE HIGHSIDE and low side refrigerator systems. P91 compressor 115 V. 50/60 cy. F-12 Evaporator: 15¾" wide x 5¾" high x 12¾" deep, and static condenser. S-88 compressor 115 volts 60 cy. Freon 12; Evaporator 11" wide x 11½" deep x 9" high, and static condenser. Systems are charged and ready for installation. Sold $36.00 each FOB Chicago, Illinois. Send for free catalog on money saving refrigeration values. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

FOR SALE: California, San Francisco Bay area. Established commercial refrigeration and air conditioning business. Nationally known products. Excellent opportunity for experienced sales administrator. Good year round business potential in growing California. Will require $40,000. BOX A6204, Air Conditioning, Heating & Refrigeration News.

Heat Controller Shows Dehumidifier Line

JACKSON, Mich.—Heat Controller, Inc. had showing on its new dehumidifier line at a meeting of manufacturer's representatives here.

The 1959 dehumidifier line has four models: "Special Portable" series and "Deluxe" series. Full capacity 1/6 and 1/5-hp. Tecumseh compressors take up to 3 gals. of water from the air daily, the company said. Polystyrene water bucket has capacity of 8½ qts. and all units are equipped with a hose attachment for drainage.

Unit suggested list price range is from $94.95 to $139.95. Colors are woodtone brown and sand beige and units have casters for easy moving.

Heat Controller will announce its central air conditioning and heat pump line at a later date.

Use To Be Optional After April 1

New Minimum Property Standards Mandatory on July 1, Says FHA

WASHINGTON, D. C. — The Federal Housing Administration's new Minimum Property Standards will become mandatory throughout the country July 1 but may be used as early as April 1, Commissioner Julian H. Zimmerman has announced.

All applications for FHA mortgage insurance received on or after July 1 must comply with the new MPS's in their entirety, including any approved Local Acceptable Standards in specific areas, Zimmerman said. However, an interim transition period will start April 1.

Articles appearing in the Dec. 15, 1958 and Jan. 26, 1959 issues reviewed changes in the Standards which affect cooling and heating respectively.

"In the past few months," the Commissioner explained, "we have received many requests from builders and material producers for permission to use the new MPS's as soon as possible.

"On the other hand, certain prefabricators and large builders who schedule design and planning far in advance of actual field construction, have requested a delayed effective date to enable them to make the necessary adjustment.

"To recognize both positions, we have decided to delay the mandatory effective date until July 1, but to provide an interim period, starting April 1, when either the old Minimum Property Requirements or the new MPS's may be used."

Zimmerman said this delayed mandatory date will ease the transition from the old requirements to the new standards and that the additional time will provide for any necessary adjustments or modifications to the standards.

Commissioner Zimmerman announced five conditions under which FHA insurance applications will be inspected and processed during the period from April 1 through June 30:

1. Either the old MPR or the new MPS shall be applied in its entirety. The use of part of the MPR with portions of the MPS is not acceptable.

2. The new MPS may be applied either on an individual case basis or on a group or development basis. At his option, a builder may elect to apply the MPS on part of a development while continuing to use the MPR on the remainder. To avoid processing delays, however, the builder should be encouraged to provide a definite break at a point where all properties can comply with the new MPS.

3. The application exhibits shall include the builder's written statement that he intends to use the new MPS; otherwise the old MPR will be considered applicable.

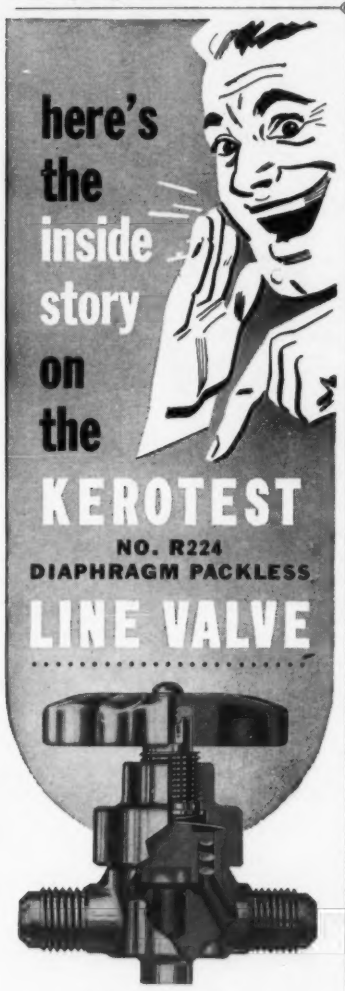
4. If the new MPS is to apply, the commitment (Form 2007) will contain an appropriate specific condition to this effect.

5. Local Acceptable Standards that are pending but not approved by Washington FHA headquarters shall not be used with the new MPS prior to their specific authorization.

Bagwell Offers Low Bid On Federal Building

BIRMINGHAM, Ala. — The George E. Bagwell Co. of Montgomery offered the low bid for installation of air conditioning and heating units in the post office and courthouse at Albany, Ga.

Air conditioning of the Pensacola post office and courthouse was completed by the Bagwell firm on a successful bid of $172,000.



FOR ALL TYPES OF REFRIGERATION AND AIR-CONDITIONING SYSTEMS

The inside story as you can see above is built-in quality and sturdy construction. Outstanding for high vacuum service, liquified petroleum gases, gasoline, instrument control panels, oxygen (degreased), compressed air, water, nitrogen and refrigeration boards. Full flow, forged brass body, beryllium copper and stainless steel diaphragms are a few of many features. Available in sizes ¼" through ⅜" flare and solder sizes. See your Kerotest wholesaler.

Ask for Model No. R224

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2502 Liberty Avenue • Pittsburgh 22, Pa.

All From One...

WILLIAMSON

Residential • Commercial

AIR CONDITIONING

SELF-CONTAINED CONDAIRE
HORIZONTAL FAN-COIL
SPACE CONSOLE
HI-BOY CONSOLE
COMPANION
DUCT-TYPE
COUNTER-FLOW
PLENUM-TYPE

No matter what type heating system . . . or even if there is none . . . you can rely on WILLIAMSON Air Conditioning to solve your cooling problem and increase profits. Choose from 8 different types, easy to install anywhere . . . thru wall or transom, in basement, crawl space or attic, on the roof, entirely inside or outside . . . with or without ducts.

2, 3, 4, 5, 7½ & 10 ton air cooled units

Write for complete information today!

THE WILLIAMSON COMPANY
3320 Madison Rd. Cincinnati 9, Ohio

NEW!

Young Quality

YOUNG RADIATOR COMPANY

LEADING MANUFACTURERS OF HEATING, COOLING AND AIR CONDITIONING EQUIPMENT

uses

REVCOR'S NEW DOUBLE INLET BLASTAIRE BLOWER WHEELS

IN THEIR ROOMAIRE CONDITIONERS

because they . . . PROVIDE MORE AIR VOLUME PER SIZE OF WHEEL!

REVCOR SINGLE AND DOUBLE INLET BLASTAIRE BLOWER WHEELS ARE USED BY OVER 60% OF THE ROOM AIR CONDITIONER MANUFACTURERS!

Write For Technical Details

Revcor, INC. 251 EDWARDS STREET CARPENTERSVILLE, ILLINOIS

Now check superheat
EASIER...FASTER...BETTER

Now comes a revolutionary development in superheat testing. The kit illustrated here gives you the easier, faster, and above all the *more accurate* superheat readings you need for that all-important adjusting and setting of the expansion valve.

All the difficulties of testing with glass tube thermometers—positioning, reading, costly breakage—are wiped out. The small bulbs of these distant reading *dial* thermometers are easily attached exactly where they should be. The distant reading feature permits placing the dials where they can be readily seen and compared. The widely spaced *one*-degree markings in the testing zone assure far more accurate reading than is possible with the closely-spaced markings of glass tube thermometers.

Note the many features described opposite—particularly the method of insulating against ambient temperature . . . which assures more accurate readings . . . better results.

At their moderate price you can own these long-lived "Super-heat" Thermometers at a fraction of the cost of using the breakable, short-lived kind!

Write for facts or ***See Your Wholesaler***

MARSH INSTRUMENT CO. *Sales Affiliate of Jas. P. Marsh Corporation*
Dept. D, Skokie, Ill.
Marsh Instrument & Valve Co. (Canada) Ltd., 8407 103rd Street, Edmonton Alberta • Export Dept., 3501 Howard St., Skokie, Ill.

MARSH Refrigeration Instruments

The "Super-heat" testing kit contains two identical, 2-inch dial-size thermometers (one for evaporator inlet and one for outlet) in attractive, highly polished brass cases. Dials are graduated −40° to +65° F. Widely spaced *one*-degree calibrations in testing zone are *guaranteed* accurate within *one* marking plus or minus. (Glass tube thermometers have crowded markings.) Each thermometer has a 12-inch capillary tubing. Bulbs are small for use in tight quarters. Kit contains two non-absorbent insulating wrappers for easy attachment of bulbs to evaporator tubing . . . also to insulate bulbs from ambient temperature. (Field studies have shown that for the highly accurate readings essential to superheat testing, ambient temperature must be insulated from thermometer bulbs.)

Thermometers and "wrappers" are neatly held in durable, transparent plastic box with convenient hinged cover, measures only 5" x 8" x 1¼".

Heat Pump In the North?--

(Concluded from Page 63, Col. 4)

1,000 heat pumps in, more each year. The air-to-air split unit is proving most popular since it is most easily adapted to existing ductwork on remodeling jobs. Our design temperature is 40°. If supplemental heat must be used during defrost, we wire it in; otherwise, we leave it unconnected or omit it.

"Good service, highly qualified servicemen are available here."

WICHITA, Kan.—"There are 80 heat pumps on our lines, all fairly new so we have no significant data to offer. We regard the split unit with favor."

CHATTANOOGA, Tenn. — "With over 33,000 resistance heated homes, this area has only 550 heat pumps. The reasons are 'chiefly historical,' and the picture will change rapidly now. A typical 3-ton unit can heat and cool for less than $100 a year."

CINCINNATI — "Very few heat pumps. Manufacturers are designing primarily for the southern market, making the units unattractive for us."

MILWAUKEE—"Since we do not experience a summer peak, we are not pushing heat pumps. Major manufacturers admit privately that their equipment is not quite ready for this climate anyway."

DETROIT — "With a home and heat pump properly mated; with true engineering design, heat pumps can and are working here at reasonable operating costs."

"A couple manufacturers have quite a few units in; now they are sitting back watching the results."

CHICAGO — "We're giving them their first real test now. In a couple years we'll know."

POTOMAC, Md. — "Heat pumps have proved successful through one of the most severe winters ever experienced in the Washington area."

HOUSTON — "From almost nothing in 1957, central heat pumps sold 276 units in '58—2 to 15 ton. In addition, 1,400 1, 1½, and 2-ton window units were sold. Further increases in sales are expected now that users are coming to know the advantages of heat pumps."

FLORIDA—"Who would use anything but heat pumps?"

Houston Sales--

(Concluded from Page 1, Col. 4)

Regarding room cooler sales, HL&PCO stated:

"The trend to larger units continued with sales of the 1½-ton units up 20%. However, the 2-ton room cooler made the most impressive gain, which bettered the preceding year's sales by a margin of 5,281 units, or 74%."

On electric heat pump volume last year, the utility reported:

"From a negligible volume in 1957, sales of heat pump room air conditioners jumped to 1,400 units, and central units, ranging from 2 to 15 tons in size, to 276 units. Steady increases in sales of both types of heating and cooling units are expected, as more homeowners and apartment builders become aware of their advantages."

The utility also had this to say on the 1959 sales outlook for electrical items:

"The market in this area is large and growing, and sales efforts will be supplemented by the most intensive national and local advertising and promotional support in the history of the industry. All signs point to 1959 being the year in which more families than ever before will begin to live better electrically."

Central Electric Heat Pumps and Reverse Cycle A/C Window Units:	Quantity Sold 1958		1957	
2-ton central heat pump	96		No Report	
3-ton central heat pump	89		"	
5-ton central heat pump	59		"	
7½-ton central heat pump	12		"	
10-15 ton central heat pump	20		"	
1-ton reverse cycle room unit (heating/cooling)	723		"	
1½-ton reverse cycle room unit (heating/cooling)	556	1,399	"	
2-ton reverse cycle room unit (heating/cooling)	120		"	
Conventional Electric Air Conditioning Units (Cooling Only)				
¾-ton room cooler (window & console)	3,439		7,687	*
1-ton room cooler (window & console)	43,642	81,681	45,403	78,705
1½-ton room cooler (window & console)	22,210		18,506	
2-ton room cooler (window & console)	12,390		7,109	
2-ton central A/C unit	955		821	
3-ton central A/C unit	3,374		3,875	
4-ton central A/C unit	1,492			
5-ton central A/C unit	1,345	7,777	2,406	7,881
7½-ton central A/C unit	359			
10-ton central A/C unit	152		779	
15-ton central A/C unit	100			

*Includes reported ½-ton units.

Building--

(Concluded from Page 1, Col. 3)

reached a record $7.1 billion. Residential building was up 30% from a year earlier but spending for industrial plants was off 35%.

The Government's estimates of construction outlays are based chiefly on past contract awards, usual progress patterns, and assumed normal seasonal conditions.

About the same time, F. W. Dodge Corp., construction news and marketing concern, reported that building activity measured by contract awards for future work remained high in January. It said awards totaled $2,319,-167,000, an increase of 12% from the previous January and a bit above the December, 1958 level.

Main strength was in housing contracts, according to Dodge. Contracts for homes and apartment buildings in January aggregated $1,021,516,000, up 31% compared with a year earlier and better than the December figure of $981,120,000. In number of units, the January total was 84,166, up 33% from January, 1958, and higher than in December when the total was 79,263.

Non-residential construction contracts rose 8% in January from the year-earlier level, with commercial, hospital, and religious building showing gains. Heavy engineering contracts were down 10%.

Earlier, the Federal Housing Administration reported that applications for FHA mortgage insurance were at near-record volume in January.

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IN TWO PARTS—PART TWO

AIR CONDITIONING HEATING & REFRIGERATION NEWS

The Newspaper of the Industry

"Specifications Section"

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115 Companies List 1959 Air Conditioning Specs

DETROIT—Specifications data on 1959 lines of air conditioning equipment offered by 115 manufacturers has been compiled by AIR CONDITIONING, HEATING & REFRIGERATION NEWS and is presented in this special section.

This is believed to be the most complete specifications report yet to be made available. More abundant data is included than in previous years. More questions were asked and answered and a new category—split systems—is added.

Number of companies submitting specifications is slightly smaller than in 1958 when an all-time high of 121 was reached. However, when others known to be making equipment are added, the industry total equals or exceeds last year.

With few exceptions, all manufacturers with national distribution and most of those with regional distribution have listed their equipment here.

These listings cover 34 lines of room air conditioners, 42 lines of commercial packaged air conditioners, 57 lines of packaged residential air conditioners, 36 lines of heat pumps, and 76 lines of commercial and/or residential split systems.

In comparison with last year, 11 more firms have swelled the ranks of heat pump manufacturers. On the other hand, the number of room air conditioner marketers has dropped by seven and commercial packaged air conditioner producers by nine.

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New Category on Split Systems

Because of the new split system category, the number of packaged residential air conditioning lines cannot be compared with last year. In 1958, the residential category included both split and packaged types. There were 87 lines.

It must be emphasized that data presented here is that offered by the manufacturer. It does not represent any evaluation by the NEWS. Only editing has been in the interest of space considerations.

Each type of equipment—room cooler, commercial, residential, heat pump, and split system—is presented separately. Lines are listed by brand name. Brand names, where they differ from the company name, are found in parentheses after the company name in the adjoining index.

In the new split system category, condensing units are listed on the left half of the page and evaporator and evaporator-blower units on the right half.

An attempt has been made to limit the latter to upflow units, except where other types of evaporators differ significantly in their specifications or cover sizes not included in the upflow design.

New data sought this year includes KW input total on commercial units, heat pumps, and split systems, and locked rotor inrush on room coolers.

We also asked manufacturers to specify the type of refrigerant control on all types of equipment except heat pumps.

Manufacturers of room air conditioners, heat pumps, and residential air conditioners were asked for dehumidification capacity of their units.

Room air conditioner makers were urged to specify the location of controls on the unit and the type of application for which the unit is designed.

Questions posed to heat pump manufacturers were rearranged to make clearer the heat source and supplementary heat available, data on inside and outside coil, and both heating and cooling rating conditions.

In addition to the companies listed in this section, several manufacturers marketing units do not appear for several reasons.

A Few Are Missing

Most obvious omission is Carrier Corp. The company made the following statement:

"The Unitary Equipment Div. of Carrier Corp. states that information concerning its soon-to-be-announced new products is not available at this time. When the products are introduced, specifications will be made available through our distribution."

Fraser & Johnston Co., San Francisco, because it will be making some model changes in the near future, did not submit specifications in time for this issue. However, company officials stated that upon completion of such changes, specifications would be submitted for publication. The NEWS will publish this data when it is received.

International Heater Co., Hall Neal Furnace Co., and Burnham Corp. were unable to meet the NEWS deadline. International Oil Burner Co. does not have its unit advanced far enough for publication at this time.

Niagara Furnace Div., Forest City Foundries Co.; Cool-Ette, Inc.; Roberts-Gordon Appliance Corp.; and Thatcher Furnace Co. do not have their 1959 lines established yet.

Among those whose lines were included in the NEWS' 1958 specifications, Farquhar Co., E. B. Smith, Inc., and York-Shipley, Inc. stated they will not offer air conditioning equipment this year.

On the other hand, a round dozen manufacturers who did not submit listings in 1958 have come in this year. They are Acme Industries, Inc.; Chattanooga Royal Co.; Cobell Industries, Inc.; Comfort Products, Inc.; Dialatemp, Inc.; Embassy Steel Products, Inc.; Miami Products, Inc.; Modine Mfg. Co.; National Thermatic Corp.; Revco, Inc.; Viking Mfg. Corp.; and Weatherbuster Corp.

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Residential Air Conditioning Systems—Complete

Residential

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heating Type	Water Usage (G.p.m./Ton)	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows Deep	Refrigerant No.	Charge (Lbs.)	Factory Charged?	Control	Control Temp.	Control Damper	Air Filters No.	Type	Dimensions	Evaporator Blowers No.	C.f.m.	R.p.m.	Net Weight
AFCO—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																															
AM-2	22¾	28	67	22,000	6.0	...	...	...	1	Tecumseh	2	B21U16	1	230	Tube & Fin	Air	1.82	3	R-22	3# 8	Yes	Cap.	Yes	No	1	Permanent	19¼x24x1	1	800	900	300
AM-3-3	22¾	28	76	34,000	9.0	...	...	...	1	Tecumseh	3	PJE300	1—3	230/208/230	Tube & Fin	Air	2.48	4	R-22	3# 12	Yes	Cap.	Yes	No	1	Permanent	25½x24x1	1	1200	900	400
Air filters and blower optional.																															
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																															
1169-03	23½	29½	36½	21,000	5.21	...	...	...	1	Tecumseh	2	B21T16	1	230	Tube & Fin	Air	2.52	3	R-22	3.5	Yes	Cap.	Yes	No	...	...	...	1	750	1125	300
1169-3	27¾	45	33½	33,000	10.3	...	...	...	1	Tecumseh	3	JE300	1—3	230/230	Tube & Fin	Air	3.21	3	R-22	5.06	Yes	Cap.	Yes	No	...	...	...	1	1200	1125	382
Amana—Amana Refrigeration, Inc., Amana, Iowa																															
PK324-1A	21	30	49	24,000	7.2	...	...	...	1	Tecumseh	2	B21U16	1	230	Fin & Tube	Air	1.88	4	R-22	3.5	Yes	Cap.	Opt.	No	...	...	...	1	650- 900	1100	280
PK336-1	25	34	45	36,000	11.0	...	...	...	1	Tecumseh	3	PJE300	1	230	Fin & Tube	Air	2.67	4	R-22	6.0	Yes	Cap.	Opt.	No	...	...	...	1	1000-1360	1100	429
PK448T-1	31	40	64	48,000	14.0	...	...	...	2	Tecumseh	2	B21U18	1	230	Fin & Tube	Air	3.67	4	R-22	7.0	Yes	Cap.	Opt.	No	...	...	...	1	1550-1830	1100	612
PK560T-1	31	40	70	61,000	17.0	...	...	...	2	Tecumseh	3	PJG300	1	230	Fin & Tube	Air	4.67	4	R-22	9.5	Yes	Cap.	Opt.	No	...	...	...	1	1900-2110	1100	718
American-Standard—American-Standard Air Conditioning Div., 40 W. 40th St., New York 18, N. Y.																															
ACP-20	20⅞	39¾	29½	23,500	6.2	...	...	...	2	Tecumseh	1	...	1	230	Fin & Tube	Air	1.9	3	R-22	3.14	Yes	Cap.	Yes	No	1	Disposable	12x24x1	1	880	1120	343
ACP-35	24½	47⅜	36½	39,000	9.9	...	...	...	2	Tecumseh	1¾	...	1	230	Fin & Tube	Air	2.7	4	R-22	5.37	Yes	Cap.	Yes	No	1	Disposable	14x28x1	2	1505	1120	508
HCA-3	18⅝	25	21½	25,000	9.1	...	...	1½	1	Tecumseh	2	...	1—3	230/208/220	Tube In Tube	Water	2.11	3	R-22	2# 11	Yes	Cap.	Yes	No	...	...	...	...	...	...	350
HCA-5	46½	43	23½	62,900	17.3	...	...	1½	1	York	5	...	3	208/220	Shell & Coil	Water	5.98	3	R-22	6# 10	Yes	Cap.	Yes	No	...	...	...	...	...	...	695
HCA-2H	20	43⅞	23	24,180	7.5	...	...	1½	1	Tecumseh	2	...	1	230	Tube In Tube	Water	2.11	2	R-22	2# 11	Yes	Cap.	No	No	...	...	...	...	...	...	...
HCA-3H	23	43⅞	23	36,040	10.3	...	...	1½	1	Tecumseh	3	...	3	208/220	Tube In Tube	Water	2.55	3	R-22	3# 15	Yes	Cap.	No	No	...	...	...	...	...	...	...
C-85-0B-2W†	55	46¾	28½	25,000	8.9	72,250	Oil	1½	1	Tecumseh	2	...	1—3	230/208/220	Tube In Tube	Water	2.11	3	R-22	2# 11	Yes	Cap.	Yes	No	1	Disposable	20x25x1	1	800	690	831
C-85-0B-3W†	55	46¾	28½	37,000	13.7	72,250	Oil	1½	1	Tecumseh	3	...	1—3	230/208/220	Tube In Tube	Water	2.55	4	R-22	2# 15	Yes	Cap.	Yes	No	1	Disposable	20x25x1	1	1200	800	846
C-112-0B-2W†	57½	46¾	28½	25,000	8.9	95,200	Oil	1½	1	Tecumseh	2	...	1—3	230/208/220	Tube In Tube	Water	2.11	3	R-22	2# 11	Yes	Cap.	Yes	No	2	Disposable	15x20x1	1	800	690	353
C-112-0B-3W†	57½	46¾	28½	37,000	13.7	95,200	Oil	1½	1	Tecumseh	3	...	1—3	230/208/230	Tube In Tube	Water	2.53	4	R-22	2# 15	Yes	Cap.	Yes	No	2	Disposable	15x20x1	1	1200	800	888
†Also available with remote air-cooled condensing units at slightly less cooling capacity, evaporator has expansion valve, factory holding charge.																															
APCo—Addison Products Co., Addison, Mich.																															
W2502-3	18⅝	26⅝	35½	19,700	...	...	...	...	1	Tecumseh	3	B21T16	1	230	Tube & Fin	Air	1.3	4	R-22	2#	Yes	Cap.	Yes	No	1	Permanent	21½x 9x1½	1	540	1120	265
PA23-1	23	29⅞	30½	22,000	...	...	...	...	1	Tecumseh	3	B21U16	1	230	Tube & Fin	Air	1.9	3	R-22	2# 14	Yes	Cap.	Yes	No	...	...	...	1	750	1135	345
PA30-1	26	33	49¾	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Tube & Fin	Air	2.8	3	R-22	4#	Yes	Cap.	Yes	No	...	...	...	1	1130	1075	405
PA40-1	26	32	49¾	40,000	...	...	...	...	2	Tecumseh	2	B21U18	1	230	Tube & Fin	Air	2.8	4	R-22	5# 13	Yes	Cap.	Yes	No	...	...	...	1	1380	1100	470
Armstrong—Armstrong Furnace Co., 851 W. Third Ave., Columbus, Ohio																															
42-R10-21	25⅝	51	27	19,800	...	...	...	...	1	Tecumseh	2	B21T16	1	230	Tube & Fin	Air	1.83	3	R-22	3.6	Yes	X Valve	Yes	No	...	...	...	1	800	825	358
42-R10-31	27½	53⅛	33½	35,100	...	...	...	...	1	Tecumseh	3	JE300	1	230	Tube & Fin	Air	3.66	3	R-22	7.5	Yes	X Valve	Yes	No	...	...	...	1	1200	900	522
Barkow Weatherwise—Aug. G. Barkow Mfg. Co., 2230 S. 43rd St., Milwaukee 46, Wis.																															
CK2-A	62	31	21	21,750	...	...	...	...	1	Tecumseh	2	JB-200	1	230	Fin & Tube	Air	2.66	4	R-22	7.5	Yes	X Valve	Yes	No	1	Permanent	16x25	1	800	661	480
CK3-A	62	31	21	36,700	...	...	...	...	1	Tecumseh	3	JE-300	1—3	208/230/440	Fin & Tube	Air	2.66	4	R-22	7.5	Yes	X Valve	Yes	No	1	Permanent	16x25	1	1200	661	490
CK5-A	66½	38⅝	23¼	58,500	...	...	...	...	1	Tecumseh	5	FB-500	1—3	208/230/440	Fin & Tube	Air	3.75	4	R-12	24	Yes	X Valve	Yes	No	2	Permanent	15x20	1	2000	696	650
CK7S-A	66½	52⅛	23¼	90,500	...	...	...	...	1	Copeland	7½	MRP-500	1—3	208/230/440	Fin & Tube	Air	5.62	4	R-22	15	Yes	X Valve	Yes	No	3	Permanent	15x20	2	3000	616	1015
CK2-W	62	31	21	22,550	...	...	...	...	1	Tecumseh	2	JB-200	1	230	Tube In Tube	Water	2.66	4	R-22	3	Yes	Cap.	Yes	No	1	Permanent	16x25	1	800	661	480
CK3-W	62	31	21	37,500	...	...	...	...	1	Tecumseh	3	JE-300	1—3	208/230/440	Tube In Tube	Water	2.66	4	R-22	3	Yes	Cap.	Yes	No	1	Permanent	16x25	1	1200	661	490
CK5-W	66½	38⅝	23¼	61,200	...	...	...	...	1	Tecumseh	5	FB-500	1—3	208/230/440	Shell & Tube	Water	3.75	4	R-22	6	Yes	Cap.	Yes	No	2	Permanent	15x20	1	3000	690	850
CK7S-W	66½	52⅛	23¼	93,800	...	...	...	...	1	Copeland	7½	9R3-750	1—3	208/230/440	Shell & Tube	Water	5.62	4	R-22	9	Yes	X Valve	Yes	No	3	Permanent	15x20	2	3000	616	1015
K100-W	71¼	60	27	122,500	...	...	...	...	2	Tecumseh	5	...	3	230/208	Shell & Tube	Water	7.5	4	R-22	12	Yes	Cap.	Yes	No	3	Permanent	16x20	2	3000	690	1225
Bonair—Peerless Products Co., 23rd St. & Sedgley Ave., Philadelphia 32, Pa.																															
W2502	19	26	35	19,700	...	...	...	...	1	Tecumseh	...	...	1	230	...	Air	...	...	R-22	...	Yes	Cap.	...	...	...	Perm. or Disp.	...	1	540	...	...
PA22	23	30	30	22,000	...	...	...	...	1	Tecumseh	...	...	1—3	230	...	Air	...	...	R-22	...	Yes	Cap.	...	...	...	Perm. or Disp.	...	1	750	...	...
PA30	26	32	50	30,000	...	...	...	...	1	Tecumseh	...	...	1—3	230	...	Air	...	...	R-22	...	Yes	Cap.	...	...	...	Perm. or Disp.	...	1	1130	...	...
PA40	26	32	50	40,000	...	...	...	...	1	Tecumseh	...	...	1—3	230	...	Air	...	...	R-22	...	Yes	Cap.	...	...	...	Perm. or Disp.	...	1	1380	...	...
Brown—Brown Products Corp., 1090 Springfield Rd., Union, N. J.																															
W2502	18½	26⅝	35½	19,700	...	...	...	...	1	Tecumseh	...	...	1	230	Tube & Fin	Air	...	...	R-22	...	Yes	Cap.	Yes	Yes	1	Permanent	...	1	540	...	255
PA22	23	29⅞	30½	22,000	...	...	...	...	1	Tecumseh	...	...	1	230	Tube & Fin	Air	...	...	R-22	...	Yes	Cap.	No	No	...	...	...	1	750	...	345
PA30	26	32	49¾	30,000	...	...	...	...	1	Tecumseh	...	...	1	230	Tube & Fin	Air	...	...	R-22	...	Yes	Cap.	No	No	...	...	...	1	1130	...	405
PA40	26	32	49¾	40,000	...	...	...	...	1	Tecumseh	...	...	1	230	Tube & Fin	Air	...	...	R-22	...	Yes	Cap.	No	No	...	...	...	1	1380	...	470
Bryant—Bryant Mfg. Co., 2020 Montcalm St., Indianapolis, Ind.																															
24-556	22	36⅛	46	25,000*	...	...	...	...	...	...	...	...	1	230	Fin & Tube	Air	...	...	R-22	4.25	...	Cap.	Opt.	No	1	...	12x36	1	900	...	285†
30-556	22	36¼	46	34,000*	...	...	...	...	...	...	...	...	1—3	230	Fin & Tube	Air	...	...	R-22	5.75	...	Cap.	Opt.	No	1	...	12x33	1	1070	...	400†
*Rated under ARI standard 210-58. †Shipping weight.																															
Century—Century Engineering Corp., 401 Third St., S.E., Cedar Rapids, Iowa																															
A-300	21	24	40½	22,000	...	...	...	...	2	Tecumseh	1	...	1	230	Fin & Tube	Air	...	...	R-22	3	Yes	Cap.	Yes	No	...	...	...	1	800	...	343
A-350	24½	32	48¾	36,000	...	...	...	...	2	Tecumseh	1½	...	1	230	Fin & Tube	Air	...	...	R-22	5	Yes	Cap.	Yes	No	...	...	...	2	1400	...	508
Coleman—The Coleman Co., 250 N. St. Francis St., Wichita 1, Kan.																															
6211	21	30	46	23,500	4.23	...	...	...	1	B-W	2	H490TA-2	1	230	Fin & Tube	Air	2.0	3	R-22	3.31	Yes	Cap.	Yes	No	...	...	...	1	920	1125	326
6312	21	30	46	23,800	4.23	...	...	...	2	B-W	1	B1516	1	230	Fin & Tube	Air	2.0	3	R-22	3.1	Yes	Cap.	Yes	No	...	...	...	1	920	1125	360
6313A	21	34½	54½	36,300	8.1	...	...	...	2	Tecumseh	1¾	B74T16	1	230	Fin & Tube	Air	2.5	4	R-22	5.43	Yes	Cap.	Yes	No	...	...	...	1	1200	1125	398
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																															
PA22	23	29⅞	30¼	22,000	...	...	...	...	1	Tecumseh	2	B21U18	1	230	Fin & Coil	Air	2.0	3	R-22	2⅞	Yes	Cap.	Yes	No	...	...	...	1	750	1120	345
PA-30	26	32	49¾	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Fin & Coil	Air	2.8	3	R-22	4	Yes	Cap.	Yes	No	...	...	...	1	1130	1050	405
PA-40	26	32	49¾	40,000	...	...	...	...	2	Tecumseh	2	B21U18	1	230	Fin & Coil	Air	2.8	4	R-22	5¾	Yes	Cap.	Yes	No	...	...	...	1	1380	1100	470
Note: Commercial fronts available.																															
Condaire—The Williamson Co., 3500 Madison Rd., Cincinnati 9, Ohio																															
6128-02	22½	31	50	24,000	...	...	...	...	1	B-W	2	H490-TA	1	230	Tube & Fin	Air	1.9	4	R-22	3.6	Yes	Cap.	Yes	No	...	...	...	1	800	...	420
6128-03	26	38	55	36,000	...	...	...	...	1	Tecumseh	3	JE300	1	230	Tube & Fin	Air	2.5	4	R-22	5.2	Yes	Cap.	Yes	No	...	...	...	1	1200	...	600
Coolerator—Coolerator Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																															
H2A-21	17⅝	26	36	21,000	...	...	...	...	1	Tecumseh	2	B21T16	1	230	Tube & Fin	Air	1.5	4	R-22	2# 9	Yes	Cap.	Opt.	...	...	Disposable*	...	1	800	1650	243
H3A-21	23¾	30½	52½	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Tube & Fin	Air	2.5	3	R-22	5# 8	Yes	Cap.	Opt.	...	...	Disposable*	...	1	1165	1650	408
H4A-21	26¾	36⅞	48¼	40,000	...	...	...	...	2	Tecumseh	2	B21T16	1	230	Tube & Fin	Air	3.14	5	R-22	3#/3# 2	Yes	Cap.	Opt.	...	...	Disposable*	...	1	1625	1650	501
*With Decorator fronts only.																															
Day & Night—Day & Night Mfg. Co., La Puente, Calif.																															
240 ACS-1B	21½	30¼	35	23,000	...	...	...	...	1	Tecumseh	2	B21T18	1	230	Plate Fin	Air	2.05	3	R-22	3.9	Yes	Cap.	Yes	No	1	...	24x12	1	800	...	330
340 ACS-1-3A	22	36¼	45½	34,000	...	...	...	...	1	Tecumseh	3	JE-300	1—3	230/208/220	Plate Fin	Air	2.63	4	R-22	5.7	Yes	Cap.	Yes	No	1	...	33x13	1	1070/1060*	...	400
480 ACS-1-3A	27¾	49½	48¾	47,000	...	...	...	...	1	Tecumseh	4	PFB-400	1—3	230/208/220	Spiral Fin	Air	4.98	2	R-22	10.0	Yes	X Valve	Yes	No	1	...	26x15	2	1675	1030	745
Note: Filter not supplied—minimum filter area shown. *1060 on 3-ph. model.																															
Delco—Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 6, N. Y.																															
OU-22D	23	29⅞	30¼	22,000	...	...	...	...	1	Tecumseh	2	B21U18	1	230	...	Air	1.94	3	R-22	2.86	Yes	Cap.	Yes	No	...	...	...	1	750*	...	345
OU-30D	26	32	49¾	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	...	Air	2.81	3	R-22	4.0	Yes	Cap.	Yes	No	...	...	...	1	1130*	...	405
OU-40D	26	32	49¾	40,000	...	...	...	...	2	Tecumseh	2	B21U18	1	230	...	Air	2.81	4	R-22	5.81	Yes	Cap.	Yes	No	...	...	...	1	1380*	...	470
*At .3 in. SP.																															
Double Kool—Hastings Air Conditioning Co., Inc., 108 South Colorado St., Hastings, Neb.																															
KP-15	32½	40⅛	36½	44,500*	...	...	...	1†	1	Tecumseh	1½	B32P16	1	115/230	Tube In Tube	Water	2.25	4 & 2	R-22	2.0	...	Cap.	...	...	2	Disposable	16x20x1	1	1400	985	550
DK-15	63¾	35⅞	24	44,500*	...	...	...	1†	1	Tecumseh	1½	B32P16	1	115/230	Tube In Tube	Water	2.25	4 & 2	R-22	2.0	...	Cap.	...	...	2	Disposable	15x20x1	1	1415	1090	545
DK-30	55⅝	48	27	76,900*	...	157,500	Steam	1†	1	Tecumseh	3	JE300	1	230/208/220	Tube In Tube	Water	3.8	4 & 2	R-22	3.0	...	Cap.	...	...	3	Disposable	16x23x2	1	2200	835	775
*Based on 85-70 Entering Air and 56° entering water. †Water used twice. First through 4-row "Pre-Cool" coil, then through condenser.																															
Dowagiac—Dowagiac Steel Furnace Co., Dowagiac, Mich.																															
DAC-2	17½	22	14⅜	20,500	...	...	...	...	1	Tecumseh	1¾	...	1	230	...	Water	2.43	2	R-22	2# 11	Yes	...	Yes	No	2	Disposable	16x25	1	800	566	534
DAC-3	18⅞	24½	12	33,800	...	...	...	...	1	Tecumseh	3	...	1—3	230	...	Water	2.52	4	R-22	2# 15	Yes	...	Yes	No	2	Disposable	16x25	1	1200	763	564
DAC-5	18⅞	37⅛	12	60,000	...	...	...	...	1	Tecumseh	5	...	1—3	230	...	Water	4.15	4	R-22	2# 11	Yes	...	Yes	No	2	Disposable	20x25	2	2000	659	935
Fandaire—F5 Air Conditioning Corp., 1901 South Maybelle, Box 9355, Tulsa, Okla.																															
30-22-1	38	31	31	22,600*	...	...	...	...	1	Tecumseh	2	JE200	1	230	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
45-22-1-3	49	31	31	33,900*	...	...	...	...	1	Tecumseh	3	JE300	1—3	230/208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
45-12-1-3	49	31	31	31,500*	...	...	...	...	1	Copeland	3	3R42-300	1—3	230/208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
75-22-1-3	68	36	36	63,800*	...	...	...	...	1	Copeland	5	LRG-530	1—3	230/208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
75-12-1-3	68	36	36	54,400*	...	...	...	...	1	Copeland	5	MRF-500	1—3	230/208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
112-22-3	51½	36	36	81,000*	...	...	...	...	1	Copeland	7½	MRG-750	3	208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
150-22-3	56	45	45	114,200	...	...	...	...	1	Copeland	10	9R8-1000	3	208/220	Fin & Tube	Air	...	...	R-22	...	...	...	...	...	...	...	...	...	...	...	...
*At 40° suction 95° ambient.																															

Residential

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities: Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heating Type	Water Usage (G.p.m./Ton)	Compressor: No.	Make	Hp.	Mfrs. No.	Motor: Phase	Volts	Condenser: Type	Cooling Medium	Evaporator: Face Area (Sq. Ft.)	Rows Deep	Refrigerant: No.	Charge (Lbs.)	Factory Charged?	Control	Control: Temp.	Damper	Air Filters: No.	Type	Dimensions	Evaporator Blowers: No.	C.f.m.	R.p.m.	Net Weight
Fedders—Fedders Corp., 58-01 Grand Ave., Maspeth, N. Y.																															
617AB-2	17¾	37	28¾	21,500	5.0	...	...	...	1	Tecumseh	2	...	1	230	Fin & Tube	Air	1.35	3	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	600†	1100	225
630AE-2/8	26½	41¼	36½	33,000	8.7	...	...	...	1	Tecumseh	3	...	1—3	230	Fin & Tube	Air	2.0	4	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	1180†	1100	350
C-936-A-3/8	21¾	37½	44½	34,000	...	...	...	...	1	Tecumseh	3	...	1—3	230	Fin & Tube	Air	1.97	4	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	1240†	1100	390
836W-2	20¾	42¾	36½	36,000	9.3	...	...	...	1	Tecumseh	3	...	1	230	Coil	Water	2.6	4	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	1130†	1100	318
C-924-A-3/8	21¾	37½	44½	...	...	...	...	...	1	Tecumseh	2	...	1—3	230	Fin & Tube	Air	1.97	3	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	...	...	...
830AH-3/8	26½	41¾	36½	33,000	8.7	72,500*	...	...	1	Tecumseh	3	...	1—3	230	Fin & Tube	Air	2.0	4	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	1180†	1100	385
HE-936-A-3/8	21¾	37½	44½	36,000	...	72,700*	...	...	1	Tecumseh	3	...	1—3	230	Fin & Tube	Air	1.97	4	R-22	...	Yes	Cap.	Yes	...	...	Optional	...	1	1240†	1100	445

*At 20° outside temperature—°F. †At .3-in. static pressure.

Forston & Lincoln—The Forston Co., 1400 Conti St., Houston 2, Texas																															
PEC-2	20¾	25⅝	39	23,300	...	...	...	...	1	Tecumseh	2	B21U18	1	230	Fin & Tube	Air	1.55	4	R-22	3½	Yes	Cap.	Yes	...	1	Optional	10x20*	1	800	1050	315
PEC-3	20¾	25⅝	39	35,000	...	...	...	...	1	Tecumseh	3	JE 300	1—3	230/220	Fin & Tube	Air	2.10	4	R-22	5½	Yes	Cap.	Yes	...	1	Optional	10x20*	1	1200	1050	480
PKC-5	31¾	37½	69	59,000	...	...	...	...	1	Tecumseh	5	FB 500	1—3	230/220	Fin & Tube	Air	4.24	4	R-22	8½	Yes	X Valve	Yes	...	1	Optional	10x20*	1	2000	1075	960

*Size used may vary according to installation and return air provisions in duct.

Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																															
AZZ-180	18	28½	38	19,000	4.3	...	...	...	1	Frigidaire	...	...	1	230	Fin & Tube	Air	1.89	4	R-22	2.3	Yes	Cap.	Yes	No	1	Permanent*	28¼x11⅞	1	700	1075	245
AZZ-240	22½	29½	42½	24,000	10.4	...	...	...	2	Frigidaire	...	...	1	230	Fin & Tube	Air	2.14	4	R-22	1.7 ea.	Yes	Cap.	Yes	No	1	Permanent*	28½x14⅝	1	1200	1075	375
AIAZ-240	26	28¼	25¼	24,000	6.1	...	...	...	2	Frigidaire	...	...	1	230	Fin & Tube	Air	2.36	3	R-22	1.5 ea.	Yes	Cap.	Yes	No	...	...*	...	...	...	...	340
AIAZ-250	26	28¼	25¼	25,000	8.6	...	...	...	2	Frigidaire	...	...	1	230	Fin & Tube	Air	3.30	3	R-22	1.7 ea.	Yes	Cap.	Yes	No	...	...*	...	...	...	...	370

*Air filter for AZZ models supplied with optional plenum only. The AIAZ models utilize the furnace filter. Note: AIAZ models utilize the furnace blower and ducts.

Gaffers & Sattler—Utility Appliance Corp., 4851 S. Alameda St., Los Angeles, Calif.																															
3TP-1-3	24½	36	46½	38,000	...	...	...	...	1	Tecumseh	3	PJE300	1—3	230	Fin & Tube	Air	2.67	4	R-22	6.0	Yes	Cap.	Yes	...	1	Disposable	...	2	1400	1100	500

Genatron—General Air Conditioning Corp., 4542 E. Dunham St., Los Angeles 23, Calif.																															
LD 20	23½	26½	46½	24,000	...	40,250	Heat P.	...	1	Tecumseh	2	JB200	1	230	...	Air	2.62	4	R-22	4.75	Yes	Cap.	Yes	No	1	Permanent	16x30	1	1000	1060	310
LD 30	23½	30½	46½	30,500	...	63,900	Heat P.	...	1	Tecumseh	3	JB200	1	230	...	Air	2.62	6	R-22	6.0	Yes	Cap.	Yes	No	1	Permanent	16x30	1	1200	1080	365
LD 40	23½	30½	46½	42,000	...	71,600	Heat P.	...	1	Tecumseh	4	PJE300	1	230	...	Air	2.62	6	R-22	6.0	Yes	Cap.	Yes	No	1	Permanent	16x30	1	1500	950	430
RO 31 HP	29½	30	25	37,700	...	68,500	Heat P.	...	1	Tecumseh	4	PJE300	1—3	208/230	...	Air	3.04	4	R-22	6.2	Yes	Cap.	Yes	No	1	Permanent	16x30	1	1400	1080	475
RO 525A	56⅝	40	36	65,500	...	98,300	Heat P.	...	1	Tecumseh	5	PFB500	1—3	208/230	...	Air	8.69	4	R-22	12.5	Yes	Cap.	Yes	No	2	Permanent	20x20	1	2400	650	900

General Electric—General Electric Co., Air Conditioning Dept., Troup Hwy., Tyler, Texas																															
TC24B	21½	31¾	44	24,000	6.5	...	...	...	1	G-E	2.5	...	1	230	Fin & Tube	Air	1.91	3	R-22	6.0	Yes	Cap.	Yes	No	...	...	...	1	1000*	1050	410
TC30B	25¼	31¾	44	30,000	9.0	...	...	...	1	G-E	3	...	1	230	Fin & Tube	Air	2.63	3	R-22	7.0	Yes	Cap.	Yes	No	...	...	...	1	1150*	1050	440
TC36B	25¼	31¾	44	36,000	9.7	...	...	...	1	G-E	4	...	1	230	Fin & Tube	Air	2.63	3	R-22	8.0	Yes	Cap.	Yes	No	...	...	...	1	1300*	1050	480

*Dry coil—no filters.

Heatwave—Southwest Mfg. Co., N. Elliot St., Aurora, Mo.																															
HA-2001	20	32	58	23,100	...	...	...	...	1	Tecumseh	2	B21T18	1	230	Tube & Fin	Air	2.54	3	R-22	2.5	Yes	X Valve	Yes	No	1	Disposable	14x28	1	800	1050	380
HA-3001	20	32	58	38,200	...	...	...	...	2	Tecumseh	1¾	B74T16	1	230	Tube & Fin	Air	2.54	4	R-22	5.0	Yes	X Valve	Yes	No	1	Disposable	14x28	1	1300	1050	430

Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville, Tenn.																															
SCH-197	18⅝	35½	36⅝	19,700	...	...	...	...	1	Tecumseh	...	B21T18	1	230	Fin & Tube	Air	1.2	4	R-22	2	Yes	Cap.	Yes	...	1	Permanent	2½x9x½	1	475*	...	258
A30 SC	23	30½	29⅞	20,400	...	...	...	...	1	Tecumseh	...	B21T18	1	230	Fin & Tube	Air	1.87	3	R-22	2# 14	Yes	Cap.	Yes	...	1	Permanent	...	1	630†	...	235
A30 SC	24	66½	32	32,000	...	...	...	...	1	Tecumseh	...	JE300	1—3	230/220	Fin & Tube	Air	2.8	3	R-22	4# 10	...	Cap.	Yes	...	1	Permanent	...	1	1180†	...	425
A40 SC	24	59½	32	40,000	...	...	...	...	2	Tecumseh	...	B21T18	1	230	Fin & Tube	Air	2.8	4	R-22	6# 5	...	Cap.	Yes	...	1	Permanent	...	1	1380†	...	545

*At 0.2-in. external static. †At .3-in. external static.

Iron Fireman, Timken Silent Automatic & Conco—Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio																															
PA22	23	29¾	30½	22,000	...	...	...	...	1	Tecumseh	2	B21U18	1	230	Fin & Tube	Air	3.88	3	R-22	2# 14	Yes	Cap.	Yes	No	1	Disposable	...	1	750	1075	245
PA30	26	33	49¾	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Fin & Tube	Air	4.95	2	R-22	4# 10	Yes	Cap.	Yes	No	1	Disposable	...	1	1120	1075	405
PA40	26	32	49¾	40,000	...	...	...	...	2	Tecumseh	4	B21U18	1	230	Fin & Tube	Air	4.95	4	R-22	5# 3	Yes	Cap.	Yes	No	1	Disposable	...	1	1380	1075	470

Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis 8, Mo.																															
175 RA	25	27	30	...	...	...	...	...	1	Tecumseh	1¾	...	1	220	Fin & Tube	Air	2.0	3	R-22	5.0	Yes	...	Yes	No	...	Disposable	...	1	...	...	245
21 RA	24	36	44½	...	...	...	...	...	1	Tecumseh	2	...	1—3	220	Fin & Tube	Air	2.0	4	R-22	6.0	Yes	...	Yes	No	...	Disposable	...	1	...	...	410
30 RA	24	36	44½	...	...	...	...	...	1	Tecumseh	3	...	1—3	220	Fin & Tube	Air	3.0	4	R-22	6.0	Yes	...	Yes	No	...	Disposable	...	1	...	...	439
51 RA	28	41½	53	...	...	...	...	...	1	Tecumseh	5	...	1—3	220	Fin & Tube	Air	4.0	4	R-22	10.0	Yes	...	Yes	No	...	Disposable	...	1	...	...	640
21 VW	53	30	36	...	...	...	...	3.21	1	Tecumseh	2	...	1—3	220	Shell & Coil	Water	...	4	R-22	5# 11	Yes	...	Yes	No	...	Disposable	...	1	...	...	520
31 VW	53	30	36	...	...	...	...	4.9	1	Tecumseh	3	...	1—3	220	Shell & Coil	Water	...	4	R-22	2# 15	Yes	...	Yes	No	...	Disposable	...	1	...	...	540
51 VW	66	22	35	...	...	...	...	6.0	1	Tecumseh	5	...	1—3	220	Shell & Coil	Water	...	4	R-22	5# 5	Yes	...	Yes	No	...	Disposable	...	1	...	...	630

Laurel—Laurel Products, Inc., P. O. Box 946, Laurel, Miss.																															
HPAC 2	25	30	45½	24,000	...	...	...	...	1	B-W/Tec.	2	...	1	230	...	...	2.5	2	R-22	3# 13	Yes	Cap.	Yes	...	...	...	...	1	800	...	...
HPAC 3	25	30	45½	36,000	...	...	...	...	1	Tecumseh	3	...	1	230	...	...	2.5	3	R-22	4# 5	Yes	Cap.	Yes	...	...	...	...	1	1200	...	...
HPAC 4	25	30	45½	46,000	...	...	...	...	2	B-W	4	...	1	230	...	...	2.5	4	R-22	7# 10	Yes	Cap.	Yes	...	...	...	...	1	1600	...	...

Lennox—Lennox Industries, Inc., 200 S. 12th Ave., Marshalltown, Iowa																															
CHA4-301	22	30⅝	42	22,000	...	...	...	...	1	...	2	...	1	230	...	Air	1.87	4	R-22	...	...	...	Yes	Yes	...	Optional	...	1	800	...	450
CHA4-301	28	35	51⅝	36,000	...	...	...	...	1	...	3	...	1	230	...	Air	2.69	4	R-22	...	...	...	Yes	Yes	...	Optional	...	1	1200	715-909	650
CHA5-501	28	35½	66⅞	59,000	...	...	...	...	1	...	5	...	1—3	208/230/230	...	Air	4.7	4	R-23	...	...	...	Yes	Yes	...	Optional	...	1	2000	542-740	1035
CB11-301	61¼	23⅝	27⅞	36,000	...	...	...	1.56	1	...	3	...	1—3	208/230/230	...	Water	2.94	3	R-22	...	...	...	Yes	Yes	...	Optional	...	1	1200	542-740	490
CB11-501	61¼	28	27⅞	63,000	...	...	...	1.62	1	...	5	...	1—3	208/230/230	...	Water	4.4	4	R-22	...	...	...	Yes	Yes	...	Optional	...	1	2000	635-865	650
LSB1-300	61¼	23⅝	27⅞	36,000	...	...	...	...	1	...	3	...	1—3	208/230/230	...	Air	2.94	3	R-22	Holding	...	...	Yes	Yes	...	Optional	...	1	1200	475-645	282
LSB1-500	61¼	28	27⅞	59,000	...	...	...	...	1	...	5	...	1—3	208/230/230	...	Air	4.4	4	R-22	Holding	...	...	Yes	Yes	...	Optional	...	1	2000	635-865	440
LSBHB-300	24	27½	56	36,000	...	...	...	...	1	...	3	...	1—3	208/230/230	...	Air	2.94	4	R-22	Holding	...	...	Yes	Yes	1	Disposable	19x30	1	1200	686-910	254
LSBHB-500	27	34⅝	57	59,000	...	144,000*	Gas	...	1	...	5	...	1—3	208/230/230	...	Air	4.69	4	R-22	Holding	...	...	Yes	Yes	1	Disposable	36x36	1	2000	690-935	471
LSBHB-750	32	36⅝	75½	85,000	...	...	...	...	2	...	7½	...	3	208/230	...	Air	6.45	4	R-22	Holding	...	...	Yes	Yes	2	Disposable	20x44	1	3000	470-715	608
LSBHB-1000	31½	61	74	114,000	...	...	...	...	10	...	...	...	3	208/230	...	Air	9.38	4	R-22	Holding	...	...	Yes	Yes	2	Disposable	36x34	2	4000	436-667	921
C361-3001	53½-89¾	26	28	37,000	...	68,000-140,000*	Gas, O., E.	...	1	...	3	...	1—3	208/230/230	...	Air	3.13	4	R-22	Holding	...	...	Yes	Yes	1	Disposable	40x24	1	1200	Selected	296-315
C361-5001	53½-89¾	34	28	59,000	...	102,000-175,000*	Gas, O., E.	...	1	...	5	...	1—3	208/230/230	...	Air	4.27	4	R-22	Holding	...	...	Yes	Yes	2	Disposable	40x32	1	2000	Selected	351-389
C521-7501	58½-89¾	42	28	85,000	...	68,000-280,000*	Gas, O., E.	...	1	...	7½	...	3	208/230	...	Air	6.88	4	R-22	Holding	...	...	Yes	Yes	2	Disposable	40x24	2	3000	Selected	613-647
C881-10001	58½-89¾	66	28	114,000	...	102,000-350,000*	Gas, O., E.	...	1	...	10	...	3	208/230	...	Air	9.36	4	R-22	Holding	...	...	Yes	Yes	2	Disposable	40x32	2	4000	Selected	729-765

*Input. †All "Landmark" units are equipped with "Hi-Boy," "Lo-Boy," or "Reverse-Flo" blowers as required.

Living-Air—Mayflower Air-Conditioners, Inc., Duluth Ave. & E. Seventh St., St. Paul 6, Minn.																															
201-OH	18⅝	30¼	36⅝	21,000	...	...	...	...	1	Tecumseh	1½	...	1	230	...	Air	1.2	4	R-22	7.0	Yes	Cap.	Yes	No	1	Disposable	18x16	1	750	1140	275
301-OH	26⅛	30¼	48⅛	34,000	...	...	...	...	1	Tecumseh	3	...	1—3	230	...	Air	2.9	3	R-22	4# 10	Yes	Cap.	Yes	No	1	Disposable	15x27	1	1200	1140	430

Luxaire—The C. A. Olsen Mfg. Co., Elyria, Ohio																															
2-A-100	62½	26½	36	21,200*	...	100,000	Gas‡	...	1	West.	2	CLS-21	1	230	...	Air	2.43	3	R-12	Variable	No	X Valve	Yes	Yes	1	Disposable	16x25	1	800	...	6926
2-O-84	62½	36½	36	23,500*	...	84,000	Oil†	...	1	West.	2	CLS-21	1	230	...	Water	2.43	3	R-12	2½	Yes	X Valve	Yes	Yes	1	Disposable	16x25	1	800	...	7994
3-A-140	66	44½	29	34,700*	...	140,000	Gas‡	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Air	3.3	3	R-22	Variable	No	X Valve	Yes	Yes	1	Disposable	20x25	1	1200	...	8494
3-O-112	66	44½	29	29,900*	...	112,000	Oil†	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Water	3.3	3	R-22	4	Yes	X Valve	Yes	Yes	1	Disposable	20x25	1	1200	...	9684
5-A-140	68	51	50	34,300*	...	140,000	Gas‡	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Air	5.0	3	R-22	Variable	No	X Valve	Yes	No	2	Disposable	20x25	2	2000	...	13894
5-O-112	68	51	50	62,900*	...	112,000	Oil†	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Water	5.0	3	R-22	?	Yes	Cap.	Yes	No	2	Disposable	20x25	2	2000	...	14894
5-A-175	68	51	50	54,300*	...	175,000	Gas‡	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Air	5.0	3	R-22	Variable	No	X Valve	Yes	No	2	Disposable	20x25	2	2000	...	13894
5-O-140	68	51	50	62,900*	...	140,000	Oil†	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Water	5.0	3	R-22	?	Yes	Cap.	Yes	No	2	Disposable	20x25	2	2000	...	14894
3-HC-140†	75	44½	29	34,700*	...	140,000	Gas‡	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Air	3.3	3	R-22	Variable	No	X Valve	Yes	Yes	2	Disposable	16x20	1	1200	...	9014
3-OHC-112†	75	44½	29	29,480**	...	112,000	Oil†	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Water	3.3	3	R-22	4	Yes	X Valve	Yes	Yes	2	Disposable	16x20	1	1200	...	10174

*Net Capacity: Heat generated by blower motor is deducted. **Heat generated by compressor is deducted. ‡Air-cooled model with these specifications also available with oil furnace. †Water-cooled model with these specifications also available with gas furnace. †Counter flow. §Shipping weight.

Marvair—Muncie Gear Works, P. O. Box 433, Cordele, Ga.																															
402Y	34	46¼	36	24,000	20%	51,000	Electric	...	1	Tecumseh	2	JE300	1	230	Tube & Fin	Air	1.67	4	R-22	3.0	Yes	X Valve	Yes	No	1	Disposable	20x20x1	1	800	850	490

Mathes—The Mathes Co., Div., Glen Alden Corp., 1501 Broadway, Fort Worth 5, Texas																															
24 HAH-1-3E	21½	32¼	37	24,000	...	...	...	...	1	RW	2.2	H49TA	1—3	230/208/220	Fin & Tube	Air	2.9	3	R-22	...	Yes	Cap.	Yes	...	1	Disposable	18¾x22	1	880	1080	271
36 HAH-1-3E	25½	40¾	40¾	34,000	...	...	...	...	1	Tecumseh	3.6	PJE 300	1—3	230/208/220	Fin & Tube	Air	2.5	4	R-22	...	Yes	Cap.	Yes	...	1	Disposable	20x20	1	1275	1140	474
62 HAH-1-3E	31¾	54¼	50¾	58,000	...	...	...	...	1	Tecumseh	6.2	PFB 500	1—3	230/208/220	Fin & Tube	Air	4.7	4	R-22	...	Yes	Cap.	Yes	...	2	Disposable	14x25, 16x25	1	2180	796	687

Moncrief—The Henry Furnace Co., Medina, Ohio																															
2-A-100	62½	26½	36	21,200*	...	100,000	Gas‡	...	1	West.	2	CLS-21	1	230	...	Air	2.43	3	R-12	Variable	No	X Valve	Yes	Yes	1	Disposable	16x25	1	800	...	6926
2-O-84	62½	36½	36	23,500*	...	84,000	Oil†	...	1	West.	2	CLS-21	1	230	...	Water	2.43	3	R-12	2½	Yes	X Valve	Yes	Yes	1	Disposable	16x25	1	800	...	7994
3-A-140	66	44½	29	34,700*	...	140,000	Gas‡	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Air	3.3	3	R-22	Variable	No	X Valve	Yes	Yes	1	Disposable	20x25	1	1200	...	8494
3-O-112	66	44½	29	29,900*	...	112,000	Oil†	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Water	3.3	3	R-22	4	Yes	X Valve	Yes	Yes	1	Disposable	20x25	1	1200	...	9684
5-A-140	68	51	50	34,300*	...	140,000	Gas‡	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Air	5.0	3	R-22	Variable	No	X Valve	Yes	No	2	Disposable	20x25	2	2000	...	13894
5-O-112	68	51	50	62,900*	...	112,000	Oil†	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Water	5.0	3	R-22	?	Yes	Cap.	Yes	No	2	Disposable	20x25	2	2000	...	14894
5-A-175	68	51	50	54,300*	...	175,000	Gas‡	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Air	5.0	3	R-22	Variable	No	X Valve	Yes	No	2	Disposable	20x25	2	2000	...	13894
5-O-140	68	51	50	62,900*	...	140,000	Oil†	...	1	Tecumseh	5	FB-500	1—3	230/208/220	...	Water	5.0	3	R-22	?	Yes	Cap.	Yes	No	2	Disposable	20x25	2	2000	...	14894
3-HC-140†	75	44½	29	34,700*	...	140,000	Gas‡	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Air	3.3	3	R-22	Variable	No	X Valve	Yes	Yes	2	Disposable	16x20	1	1200	...	9014
3-OHC-112†	75	44½	29	29,480**	...	112,000	Oil†	...	1	Tecumseh	3	PJE-300	1—3	230/208/220	...	Water	3.3	3	R-22	4	Yes	X Valve	Yes	Yes	2	Disposable	16x20	1	1200	...	10174

*Net Capacity: Heat generated by blower motor is deducted. **Heat generated by compressor is deducted. ‡Air-cooled model with these specifications also available with oil furnace. †Water-cooled model with these specifications also available with gas furnace. †Counter flow. §Shipping weight.

Residential

Model No.	Cabinet Height	Dimensions (In.) Width	Depth	Capacities: Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heating Type	Water Usage (G.p.m./Ton)	Compressor: No.	Make	Hp.	Mfrs. No.	Motor: Phase	Volts	Condenser: Type	Cooling Medium
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.																
MC 200	66½	31¼	24	27,000	...	...	...	...	1	Tecumseh	2	...	1	230	Tube In Tube	Water*
MC 300	66½	31¼	24	38,000	...	...	...	...	1	Tecumseh	3	...	1–3	230	Tube In Tube	Water*
MC 500	66½	43½	24	63,000	...	...	...	...	1	Tecumseh	5	...	1–3	230	Tube In Tube	Water*
MWR 200	60	29	23	27,000	...	...	...	...	1	Tecumseh	2	...	1	230	Tube In Tube	Water
MWR 300	60	29	23	38,400	...	...	...	...	1	Tecumseh	3	...	1–3	230	Tube In Tube	Water
MWR 500	72	40	25	63,600	...	...	...	...	1	Tecumseh	5	...	1–3	230	Tube In Tube	Water
*Also available air cooled with slightly less capacity and with holding charge.																
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.																
915-1-21	20½†	21	36	22,000*	5.5	...	...	...	1	Tecumseh	2	B21U18	1	230	Finned Tube	Air
915-1-31	23 †	24¾	39½	33,000*	8.7	...	...	...	1	Tecumseh	3	PJG300	1	230	Finned Tube	Air
915-1-41	25½†	27½	42⅜	43,000*	11.5	...	...	...	2	Tecumseh	2	B21U18	1	230	Finned Tube	Air
*ARI Standard 210-58. †Includes height of optional vertical discharge blower. 262.5 cu. in upper system. 57.5 cu. in lower system. ‡At .2 in. E.S.P.																
Nat—The Nat Corp., 2710 McGee Trwy., Kansas City, Mo.																
300	36	44	42	38,300	...	...	...	...	1	Copeland	3	...	...	...	...	...
500	36	44	42	57,200	...	...	...	...	1	Copeland	5	...	...	...	...	...
Northern Aire—Great Northern Mfg. Co., 1056 N. Wood St., Chicago, Ill.																
2-Ton W	37*	23½*	17⅝*	24,700	...	...	...	...	1	Tecumseh	2	JH300	1–3	230/208	Tube In Tube	Water
3-Ton W	37*	23½*	17⅝*	36,695	...	...	...	...	1	Tecumseh	3	JE300	1–3	230/208	Tube In Tube	Water
5-Ton W	49*	38 *	39 *	65,000	...	...	...	...	1	Tecumseh	5	FH500	1–3	230/208	Tube In Tube	Water
*Without cabinet, blower, or plenum. †Shipping weight.																
Oil-O-Matic—Williams Oil-O-Matic, 851 W. Third Ave., Columbus, Ohio																
42-R10-21	25⅝	51	27	19,800	...	...	...	...	1	Tecumseh	2	B21T18	1	230	Tube & Fin	Air
42-R30-31	27½	53¼	32½	35,100	...	...	...	...	1	Tecumseh	3	JE300	1	230	Tube & Fin	Air
Payne—The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.																
240AC	21½	30½	37¾	23,000*	...	...	...	...	1	Tecumseh	2	B21T18	1	230	Fin & Coil	Air
340AC	22	36½	45¾	34,000*	...	...	...	...	1	Tecumseh	3	JE300	1–3	230/220	Fin & Coil	Air
480AC	27¾	49½	50½	47,000*	...	...	...	...	1	Tecumseh	4	PFE400	1–3	230/220	Fin & Coil	Air
*Rated under ARI standards.																
RCA Whirlpool—Whirlpool Corp., St. Joseph, Mich.																
RS-7200-3	23	29⅛	33⅛	17,500	...	...	...	...	1	Tecumseh	2	B76T18	1	230	Fin & Tube	Air
Remington—Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.																
250	37½	36	24½	22,000	...	...	...	...	1	Tecumseh	2	JD200	1*	230	...	Air
*Also made for 50 cycle operation.																
Sequoia—Sequoia Mfg. Co., 1090 Brittan Ave., San Carlos, Calif.																
2ACR-75P	24	17	24	24,000	...	60,000	...	...	1	Tecumseh	2	...	1–3	230/208/220	Tube & Fin	Air
2ACR-90-112P	24	22½	24	24,000	...	72-90,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
2ACR-75RFE	24	17	29	24,000	...	60,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
2ACR-90-112RFB	24	22½	29	24,000	...	72-90,000	...	...	1	Tecumseh	2	...	1–3	230/208/220	Tube & Fin	Air
2ACR-90-112LBE	24	24	23	24,000	...	72-90,000	...	...	1	Tecumseh	2	...	1–3	230/208/220	Tube & Fin	Air
2ACR-60H	24	16	24	24,000	...	60,000†	...	...	1	Tecumseh	2	...	1–3	230/208/220	Tube & Fin	Air
3ACR-90-112P	24	22½	36½	36,000	...	72-90,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-135-150P	24	27½	36½	36,000	...	108-120,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-90-112RFB	24	22½	39	36,000	...	72-90,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-135-150RFB	22	25	39	36,000	...	108-120,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-90-112LBE	24	26½	23	36,000	...	72-90,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-150-LBE	24	26½	23	36,000	...	120,000	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
3ACR-100H	24	18	26½	36,000	...	80,000†	...	...	1	Tecumseh	3	...	1–3	230/208/220	Tube & Fin	Air
5ACR-187P	26	39	22½	58,800	...	150,000	...	...	1	Copeland	5	...	1–3	230/208/220	Tube & Fin	Air
5ACR-225P	26	39	22½	58,800	...	180,000	...	...	1	Copeland	5	...	1–3	230/208/220	Tube & Fin	Air
5ACR-187RFB	26	39	29	58,800	...	150,000	...	...	1	Copeland	5	...	1–3	230/208/220	Tube & Fin	Air
5ACR-187LBE	26	39	22	58,800	...	150,000	...	...	1	Copeland	5	...	1–3	230/208/220	Tube & Fin	Air
5ACR-225LBE	26	39	22	58,800	...	180,000	...	...	1	Copeland	5	...	1–3	230/208/220	Tube & Fin	Air
*Also available with 80-96,000 B.t.u. furnaces. † Also available with 96-120,000 B.t.u. furnaces.																
Stowaway† & Sunnyland—Crane Co., 836 So. Michigan, Chicago, Ill.																
A200†	21	29½	40½	22,000	...	...	...	...	2	Tecumseh	1	...	1	230	Fin & Tube	Air
A350†	24	36½	48⅝	36,000	...	...	...	...	2	Tecumseh	1¾	...	1	230	Fin & Tube	Air
2-A-100*	62½	36½	26	21,200	...	80,000	Gas†	...	1	West.	2	...	1	230	Fin & Tube	Air
2-O-84*	62½	36½	26	24,000	...	84,000	Oil†	3	1	West.	2	...	1	230	Tube In Tube	Water
3-A-140°	66	44½	29	36,600	...	112,000	Gas†	3	1	Tecumseh	3	...	1–3	230/208/220	Fin & Tube	Air
3-O-112*	66	44½	29	37,000	...	112,000	Oil†	3	1	Tecumseh	3	...	1–3	230/208/220	Tube In Tube	Water
3-HC-140°°	75	44½	29	36,600	...	112,000	Gas†	3	1	Tecumseh	3	...	1–3	230/208/220	Fin & Tube	Air
3-OHC-112°°	75	44½	29	29,400	...	112,000	Oil†	3	1	Tecumseh	3	...	1–3	230/208/220	Tube In Tube	Water
5-A-140°	68	51	50	57,100	...	112,000	Gas†	3	1	Tecumseh	5	...	1–3	230/208/220	Fin & Tube	Air
5-O-112*	68	51	50	62,900	...	112,000	Oil†	3	1	Tecumseh	5	...	1–3	230/208/220	Shell & Tube	Water
5-A-175°	68	51	50	57,100	...	140,000	Gas†	3	1	Tecumseh	5	...	1–3	230/208/220	Fin & Tube	Air
5-O-140°	68	51	50	62,900	...	140,000	Oil†	3	1	Tecumseh	5	...	1–3	230/208/220	Shell & Tube	Water
*Upflow. **Downflow. ‡Air-cooled model with these specifications also available with oil furnace. †Water-cooled model with these specifications also available with gas furnace.																
Sun Valley—Arkla Air Conditioning Corp., Evansville, Ind.																
500	74⅛	54⅞	25⅞	42,000*	10.8*	96,000	Gas	2.96*	...	Absorption	80,000 Gas Input B.t.u.h.		...	...	...	Water
750	79⅛	63	25⅞	60,000*	15.5*	96,000	Gas	3.96*	...	Absorption	120,000 Gas Input B.t.u.h.		...	...	...	Water
750H	79⅛	68⅛	25⅞	60,000*	15.5*	144,000	Gas	3.96*	...	Absorption	120,000 Gas Input B.t.u.h.		...	...	...	Water
*At ASRE rating conditions.																
Thermo-Products—Thermo-Products, Inc., 309 Garfield St., North Judson, Ind.																
175 AH	18⅝	30¼	36¼	21,000	...	...	...	...	1	Tecumseh	2	B21T18	1	230	...	Air
301 AH	26⅛	30¼	48¼	34,000	...	...	...	...	1	Tecumseh	3	JE300	1–3	230	...	Air
Thomas A. Edison—McCraw-Edison Co., 704 N. Clark St., Albion, Mich.																
TH2A-21	17⅜	26	36	21,000	...	...	...	...	1	Tecumseh	2	B21T18	1	230	Tube & Fin	Air
TH3A-21	21⅝	30½	52¼	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Tube & Fin	Air
TH4A-21	26¼	36⅝	68¼	40,000	...	...	...	...	2	Tecumseh	2	B21T18	1	230	Tube & Fin	Air
*With Decorator fronts only.																
Tuckaway—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																
PAS21A	24	29⅛	49⅛	24,000	...	...	...	...	1	B-W	2	CH490TA-2	1	230	Fin & Coil	Air
PAS30	24	29⅛	49⅛	36,000	...	...	...	...	1	B-W	3	YH830TA-2	1	230	Fin & Coil	Air
PAS50A	30½	36⅛	64½	60,000	...	...	...	...	2	B-W	2½	YH760TA-2, 3	1–3	230/208/230	Fin & Coil	Air
Vikimatic—Viking Mfg. Corp., 1747 Chester Ave., Cleveland 14, Ohio																
PA23	23	29⅞	30½	22,000	...	...	...	...	1	Tecumseh	2	B21U18	1	230	Tube & Fin	Air
PA30	26	32	49⅜	30,000	...	...	...	...	1	Tecumseh	3	PJG300	1	230	Tube & Fin	Air
PA40	26	32	49⅜	40,000	...	...	...	...	2	Tecumseh	2	B21U18	1	230	Tube & Fin	Air
Waterbury—The Waterman Waterbury Co., 1121 Jackson St., N.E., Minneapolis 13, Minn.																
2HA2	14⅞	28⅛	28⅝	20,000	...	...	...	...	1	Tecumseh	1½	...	1	230	Fin & Tube	Air
2HA4	24½	30	44½	37,000	...	...	...	...	2	Tecumseh	1¾	...	1	230	Fin & Tube	Air
Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.																
AIR2	35	54	30	24,200	...	...	...	...	1	Tecumseh	2	...	1–3	208/220/230	Finned Tube	Air
AIR3	35	54	30	36,100	...	...	...	...	1	Tecumseh	3	...	1–3	208/220/230	Finned Tube	Air
AIR5	49	68	24	59,800	...	...	...	...	1	Copeland	5	...	1–3	208/220/230	Finned Tube	Air
AIR7½	49	96	24	88,100	...	...	...	...	1	Copeland	7½	...	3	208/220/440	Finned Tube	Air
Westinghouse Unitaire—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.																
KU-401A .	23	30	54½	34,000	...	...	...	...	1	West.	...	CL8-31	1–3	230/208/230	Finned Coil	Air
Wright-Temp—Wright-Temp Mfg. Co., 2902 W. Thomas Rd., P. O. Box 11247, Phoenix, Ariz.																
2AHP-1	30	32	43	24,200	...	...	...	...	1	Tecumseh	2	JB200	1	208/230	Fin & Tube	Air
2RVP-1	41½	32	32	24,200	...	...	...	...	1	Tecumseh	2	JB200	1	208/230	Fin & Tube	Air
3AHP-1C	30½	52	37	35,200	...	...	...	...	2	Tecumseh	2	B21T18	1	208/230	Fin & Tube	Air
2LPEG-1	31½	63½	32	22,300	...	50,000	Gas	...	1	Tecumseh	2	B21T18	1	208/230	Fin & Tube	Air
2PFG-1	31½	71½	32	24,200	...	50,000	Gas	...	1	Tecumseh	2	JB200	1	208/230	Fin & Tube	Air
3PFG-1-3	32½	76	32	35,100	...	75,000	Gas	...	1	Tecumseh	3	PJE300	1–3	208/230	Fin & Tube	Air
York Pathfinder—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York, Pa.																
P24F	24¼	32½	40¾	23,000	6.8	...	...	...	1	York	...	...	1	208/230	Fin & Tube	Air
P36F	27¾	40⅝	42⅜	34,000	8.3	...	...	...	1	York	...	...	1–3	230/220/208	Fin & Tube	Air
P48F	29⅛	47⅞	45⅞	46,000	12.5	...	...	...	2	York	...	...	1–3	230/220/208	Fin & Tube	Air

Residential

Model No.	Evaporator: Face Area (Sq. Ft.)	Rows Deep	Refrigerant: No.	Charge (Lbs.)	Factory Charged?	Control	Control: Temp.	Dumper	Air Filters: No.	Type	Dimensions	Evaporator Blowers: No.	C.f.m.	R.p.m.	Net Weight
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.															
MC 200	3.06	3	R-22	4# 12	Yes	...	Yes	No	1	Disposable	20x22	1	800	...	440
MC 300	3.06	4	R-22	5# 12	Yes	...	Yes	No	1	Disposable	20x22	1	1200	...	465
MC 500	4.83	4	R-22	12	Yes	...	Yes	No	2	Disposable	22x16⅛	2	2000	...	680
MWR 200	3.06	3	R-22	4# 12	Yes	...	Yes	No	1	Disposable	20x22	1	800	...	415
MWR 300	3.06	4	R-22	5# 12	Yes	...	Yes	No	1	Disposable	20x22	1	1200	...	450
MWR 500	4.83	4	R-22	12	Yes	...	Yes	No	2	Disposable	22x16⅛	2	2000	...	750
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.															
915-1-21	1.69	4	R-22	3.5#	Yes	Cap.	Yes	No	1	Permanent	12x28x1	1	800‡	1075	325
915-1-31	2.19	4	R-22	6.42#	Yes	Cap.	Yes	No	1	Permanent	14x30x1	1	1375‡	1075	480
915-1-41	2.84	4	R-22	1	Yes	Cap.	Yes	No	1	Permanent	14x30x1	1	1375‡	1075	580
Nat—The Nat Corp., 2710 McGee Trwy., Kansas City, Mo.															
300	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Northern Aire—Great Northern Mfg. Co., 1056 N. Wood St., Chicago, Ill.															
2-Ton W	2.0	4	R-22	2# 11	...	Cap.	...	...	...	...	...	1	800	...	298*†
3-Ton W	2.9	4	R-22	2# 15	...	Cap.	...	...	...	...	...	1	1200	...	358*†
5-Ton W	4.2	4	R-22	5# 4	...	Cap.	...	...	...	...	...	1	2000	...	498*†
Oil-O-Matic—Williams Oil-O-Matic, 851 W. Third Ave., Columbus, Ohio															
42-R10-21	1.63	3	R-22	3.6	Yes	X Valve	Yes	No	...	...	...	1	800	825	350
42-R30-31	3.66	3	R-22	3.6	Yes	X Valve	Yes	No	...	...	...	1	1200	800	522
Payne—The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.															
240AC	2.05	3	R-22	3.9	Yes	Cap.	Yes	No	...	...	...	1	800	1060	339
340AC	2.63	4	R-22	5.75	Yes	Cap.	Yes	No	...	...	...	1	1070	1060	465
480AC	4.98	2	R-22	7.5	Yes	X Valve	Yes	No	...	...	...	2	1875	1060	745
RCA Whirlpool—Whirlpool Corp., St. Joseph, Mich.															
RS-7200-3	1.86	3	R-22	2.25	Yes	Cap.	Yes	No	2	Disposable	12x24	1	645	1050	225
Remington—Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.															
250	1.67	3	R-22	---	---	Cap.	Yes	---	1	Permanent	---	2	540	1500	430
Sequoia—Sequoia Mfg. Co., 1090 Brittan Ave., San Carlos, Calif.															
2ACR-75P	1.75	3	R-22	---	No	---	Yes	No	1	Disposable	14x25	1	800	---	---
2ACR-90-112P	1.75	3	R-22	---	No	---	Yes	No	1	Disposable	20x25	1	800	---	---
2ACR-75RFE	1.75	3	R-22	---	No	---	Yes	No	1	Disposable	16x20	1	800	---	---
2ACR-90-112RFB	1.75	3	R-22	---	No	---	Yes	No	2	Disposable	14x20	1	800	---	---
2ACR-90-112LBE	1.75	2	R-22	---	No	---	Yes	No	1	Disposable	20x25	1	800	---	---
2ACR-60H	1.75	2	R-22	---	No	---	Yes	No	---	---	---	1	800	---	---
3ACR-90-112P	2.5	3	R-22	---	No	---	Yes	No	1	Disposable	20x25	1	1200	---	---
3ACR-135-150P	2.5	3	R-22	---	No	---	Yes	No	2	Disposable	14x25	1	1200	---	---
3ACR-90-112RFB	2.5	3	R-22	---	No	---	Yes	No	2	Disposable	14x20	1	1200	---	---
3ACR-135-150RFB	2.5	3	R-22	---	No	---	Yes	No	2	Disposable	16x20	1	1200	---	---
3ACR-90-112LBE	2.5	3	R-22	---	No	---	Yes	No	1	Disposable	20x25	1	1200	---	---
3ACR-150-LBE	2.5	3	R-22	---	No	---	Yes	No	2	Disposable	14x25	1	1200	---	---
3ACR-100H	2.5	2	R-22	---	No	---	Yes	No	---	---	---	1	1200	---	---
5ACR-187P	4.43	2	R-12	---	No	---	Yes	No	2	Disposable	14x25 16x25	2	2000	---	---
5ACR-225P	4.43	2	R-12	---	No	---	Yes	No	2	Disposable	16x25 20x25	2	2000	---	---
5ACR-187RFB	4.43	2	R-12	---	No	---	Yes	No	3	Disposable	14x20	2	2000	---	---
5ACR-187LBE	4.43	2	R-12	---	No	---	Yes	No	2	Disposable	16x25	2	2000	---	---
5ACR-225LBE	4.43	2	R-12	---	No	---	Yes	No	2	Disposable	16x25 20x25	2	2000	---	---
Stowaway & Sunnyland—Crane Co., 836 So. Michigan, Chicago, Ill.															
A200†	1.87	3	R-22	3.0	Yes	Cap.	Yes	No	1	Disposable	---	1	810‡	1075	343
A350†	2.69	4	R-22	5.0	Yes	Cap.	Yes	No	1	Disposable	---	2	1350‡	1000	508
2-A-100*	2.43	2	R-12	...	Yes	X Valve	Yes	Yes	1	Disposable	16x25x1	1	800‡	800	967-982
2-O-84*	2.43	2	R-12	...	Yes	X Valve	Yes	Yes	1	Disposable	16x25x1	1	800‡	800	1074-799
3-A-140°	3.47	3	R-22	...	Yes	X Valve	Yes	Yes	1	Disposable	20x25x1	1	1200‡	800	1018-900
3-O-112*	3.47	3	R-22	...	Yes	X Valve	Yes	Yes	1	Disposable	20x25x1	1	1200‡	800	1137-1019
3-HC-140°°	3.47	3	R-22	...	Yes	X Valve	Yes	Yes	2	Disposable	16x20x1	1	1200‡	800	1070-952
3-OHC-112°°	3.47	3	R-22	...	Yes	X Valve	Yes	Yes	2	Disposable	16x20x1	1	1200‡	800	1186-1068
5-A-140°	5.0	3	R-22	...	Yes	X Valve	Yes	Yes	2	Disposable	20x25x1	2	2000‡	800	1445-1360
5-O-112*	5.93	3	R-22	...	Yes	Cap.	Yes	Yes	2	Disposable	20x25x1	2	2000‡	800	1573-1488
5-A-175°	5.0	3	R-22	...	Yes	X Valve	Yes	Yes	2	Disposable	20x25x1	2	2000‡	800	1445-1360
5-O-140°	5.93	3	R-22	...	Yes	Cap.	Yes	Yes	2	Disposable	20x25x1	2	2000‡	800	1573-1488
‡At .2 SP. §At .25 SP. Weights are approximate shipping weights.															
Sun Valley—Arkla Air Conditioning Corp., Evansville, Ind.															
500	...	...	Water	...	Yes	...	Yes	Yes	2	Disposable	16x25x1	1	1400	...	952
750	...	...	Water	...	Yes	...	Yes	Yes	4	Disposable	16x25x1	1	2000	...	1163
750H	...	...	Water	...	Yes	...	Yes	Yes	4	Disposable	16x25x1	1	2000	...	1380
Thermo-Products—Thermo-Products, Inc., 309 Garfield St., North Judson, Ind.															
175 AH	1.69	4	R-22	4.35	Yes	Cap.	Yes	No	...	...	...	1	750	1140	330
301 AH	3.1	4	R-22	8.0	Yes	Cap.	Yes	No	...	...	...	1	1280	1140	400
Thomas A. Edison—McCraw-Edison Co., 704 N. Clark St., Albion, Mich.															
TH2A-21	1.5	4	R-22	2# 9	Yes	Cap.	Opt.	...	...	Disposable*	---	1	800	1650	343
TH3A-21	2.5	3	R-22	5# 8	Yes	Cap.	Opt.	...	...	Disposable*	---	1	1165	1650	403
TH4A-21	3.14	5	R-22	3#/3# 2	Yes	Cap.	Opt.	...	...	Disposable*	---	1	1625	1050	501
Tuckaway—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio															
PAS21A	1.75	3	R-22	2.55	Yes	Cap.	Yes	No	...	...	...	1	800	1125	405
PAS30	2.33	4	R-22	4.3	Yes	Cap.	Yes	No	...	...	...	1	1100	1620	464
PAS50A	3.61	4	R-22	8.25	Yes	X Valve	Yes	No	...	...	...	1	1700	3450	820
Vikimatic—Viking Mfg. Corp., 1747 Chester Ave., Cleveland 14, Ohio															
PA23	1.9	3	R-22	2# 14	Yes	Cap.	Yes	No	...	...	...	1	750	1135	245
PA30	2.8	3	R-22	4.0	Yes	Cap.	Yes	No	...	...	...	1	1130	1070	405
PA40	2.8	4	R-22	5# 13	Yes	Cap.	Yes	No	...	...	...	1	1380	1100	470
Waterbury—The Waterman Waterbury Co., 1121 Jackson St., N.E., Minneapolis 13, Minn.															
2HA2	2.0	3	R-22	...	...	Cap.	Yes	No	1	Disposable	12x14	1	600	...	259
2HA4	2.63	4	R-22	...	...	X Valve	Yes	No	1	...	...	1	1200	...	485
Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.															
AIR2	2.75	4	R-22	...	Opt.	X Valve	Yes	Yes	1	Disposable	20x20	1	800	...	...
AIR3	2.75	4	R-22	...	...	X Valve	Yes	Yes	1	Disposable	20x20	1	1200	...	...
AIR5	4.13	4	R-22	...	...	X Valve	Yes	Yes	2	Disposable	16x25	1	2000	...	...
AIR7½	5.50	4	R-22	...	...	X Valve	Yes	Yes	2	Disposable	16x25	1	3000	...	...
Westinghouse Unitaire—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.															
KU-401A .	2.2	4	R-22	...	Yes	Cap.	Yes	No	...	...	...	1	1200	...	580
Wright-Temp—Wright-Temp Mfg. Co., 2902 W. Thomas Rd., P. O. Box 11247, Phoenix, Ariz.															
2AHP-1	2.3	4	R-22	3.0	Yes	Cap.	Yes	...	...	...	...	1	900	...	453
2RVP-1	2.3	4	R-22	3.0	Yes	Cap.	Yes	...	...	...	...	1	900	...	418
3AHP-1C	2.7	4	R-22	6# 6	Yes	Cap.	Yes	...	...	...	...	1	1350	...	520
2LPEG-1	2.0	4	R-22	4.0	Yes	Cap.	Yes	...	...	...	...	1	700	...	605
2PFG-1	2.3	4	R-22	6.0	Yes	Cap.	Yes	...	...	...	...	1	800	...	630
3PFG-1-3	3.0	3	R-22	8.0	Yes	X Valve	Yes	...	...	...	...	1	1300	...	755
York Pathfinder—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York, Pa.															
P24F	2.08

Commercial or 'Store' Type Packaged Air Conditioners

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Kw. Input
ACI—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.													
U-ACI-30	78	35½	25½	36,000	130,000	Steam	1	Copeland	3	LRH-300	1-2-3	220/230	....
U-ACI-50	84	44⅝	26⅝	61,000	220,000	Steam	1	Copeland	5	MRF-500	1-2-3	220/230	....
U-ACI-75	93	51	30¼	93,000	353,000	Steam	1	Copeland	7½	9R9-750	2—3	220	....
U-ACI-100	89½	57	30¼	121,000	401,000	Steam	2	Copeland	(2) 5	MRF-300	1-2-3	220/230	....
U-ACI-150	92½	70	31¼	182,000	558,900	Steam	2	Copeland	(2) 7½	9R9-750	2—3	220	....
U-ACI-200	93½	70	31¼	242,000	558,900	Steam	2	Copeland	(2) 10	9R8-1000	2—3	220	....
These units also available with Brunner compressors in 1—3 phase, R-22 only. Models 30, 50 also available with Tecumseh compressors in 1—3 phase, R-22 only.													
Acme—Acme Industries, Inc., Jackson, Mich.													
ASC-3	82⅞	37½	21¼	36,000‡	105,600†	Steam	1	....	3	....	1-2-3*	230/208/220/440	3.56, 5.32
ASC-5	86	48½	21¼	60,000‡	164,700†	Steam	1	....	5	....	1-2-3*	230/208/220/440	3.56, 5.32
ASC-8	88½	56½	23⅜	90,000‡	235,000†	Steam	1	....	7½	....	2—3*	220/208/440	8.65
ASC-10	99⅝	82½	31¼	120,000‡	294,000†	Steam	2	....	5	....	2—3*	220/208/440	10.79
ASC-15	98⅝	82¾	31¼	180,000‡	365,000†	Steam	2	....	7½	....	2—3*	208/220/440	17.34
ASC-3A	82⅞	37½	21½	34,600‡	105,600†	Steam	1	....	3	....	1-2-3*	230/220/208/440	4.54
ASC-5A	86	48¼	21¼	56,400‡	164,700†	Steam	1	....	5	....	1-2-3*	230/208/220/440	7.53
ASC-8A	88½	56½	23⅜	88,400‡	235,000†	Steam	1	....	7½	....	2—3*	208/220/440	10.95
ASC-15A	99⅛	82¾	31⅛	172,800‡	365,000†	Steam	2	....	7½	....	2—3*	208/220/440	22.12
PACE-20A	75	124½	46	257,800‡	621,000†	Steam	1	....	20	....	3	208/220/440	....
PACE-D30A	75	124½	46	243,600‡	621,000†	Steam	2	....	10	....	3	208/220/440	....
PACE-25A	79½	133½	46	309,600‡	780,000†	Steam	1	....	25	....	3	208/220/440	....
PACE-D25A	79½	132½	46	306,800‡	780,000†	Steam	2	....	10-15	....	3	208/220/440	....
PACE-30A	85	148½	56	372,600‡	934,000†	Steam	1	....	30	....	3	208/220/440	....
PACE-D30A	85	148½	56	372,300‡	934,000†	Steam	2	....	15	....	3	208/220/440	....
PACE-40A	93	165½	56	497,600‡	1,242,000†	Steam	1	....	40	....	3	208/220/440	....
PACE-D40A	93	165½	56	516,800‡	1,242,000†	Steam	2	....	20	....	3	208/220/440	....
PACE-50A	101	198½	63	621,000‡	1,556,000†	Steam	1	....	50	....	3	208/220/440	....
PACE-D50A	101	198½	63	619,400‡	1,556,000†	Steam	2	....	25	....	3	208/220/440	....
PACE-60A	101	198½	63	744,100‡	1,869,000†	Steam	1	....	60	....	3	208/220/440	....
PACE-D60A	101	198½	63	745,200‡	1,869,000†	Steam	2	....	30	....	3	208/220/440	....
PACW-20A	75	84¼	46	258,400‡	621,000†	Steam	1	....	20	....	3	208/220/440	....
PACW-D20A	75	84¼	46	246,000‡	621,000†	Steam	2	....	10	....	3	208/220/440	....
PACW-25A	79½	93¾	46	308,700‡	780,000†	Steam	1	....	25	....	3	208/220/440	....
PACW-D25A	79½	93¾	46	308,700‡	780,000†	Steam	2	....	10-15	....	3	208/220/440	....
PACW-30A	85	100⅝	56	374,600‡	934,000†	Steam	1	....	30	....	3	208/220/440	....
PACW-D30A	85	100⅝	56	375,400‡	934,000†	Steam	2	....	15	....	3	208/220/440	....
PACW-40A	93	117⅛	56	500,100‡	1,242,000†	Steam	1	....	40	....	3	208/220/440	....
PACW-D40A	93	117⅛	56	516,800‡	1,242,000†	Steam	2	....	20	....	3	208/220/440	....
PACW-50A	101	132¼	63	624,000‡	1,556,000†	Steam	1	....	50	....	3	208/220/440	....
PACW-D50A	101	132¼	63	619,800‡	1,556,000†	Steam	2	....	25	....	3	208/220/440	....
PACW-60A	101	132¼	63	744,800‡	1,869,000†	Steam	1	....	60	....	3	208/220/440	....
PACW-D60A	101	132¼	63	749,300‡	1,869,000†	Steam	2	....	30	....	3	208/220/440	....
‡Cooling rating conditions 80° d.b., 67° w.b. entering air. †Heating rating conditions 60° F. entering air. *Unit also made specifically for 50-cycle operation.													
AFCO Comfortmaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.													
BHC-2A1	24	25½	45	22,000	....	....	1	Tecumseh	2	B21U18	1	230	2.77
BHC-3A	24	25½	45	35,000	....	....	1	Tecumseh	3	PJE300	1—3	230/208/230	4.13
BHC-4A	24	42	45	47,500	....	....	1	Tecumseh	4	PFB400	1—3	230/208/220	5.70
BHC-5A	24	42	45	62,000	....	....	1	Tecumseh	5	PFB500	1—3	230/208/220	7.18
BHC-85A	31	52⅝	60	85,000	....	....	2	Tecumseh	7.5	PFB500 & JB200	1—3	230/208/220	11.27
BHC-120A	31	52⅝	60	124,000	....	....	2	Tecumseh	10	PFB500	1—3	230/208/220	14.05
BVC-2A1	75	28¼	24⅝	22,000	....	....	1	Tecumseh	2	B21U18	1	230	2.77
BVC-3A	75	28¼	24⅝	35,000	....	....	1	Tecumseh	3	PJE300	1—3	230/208/220	4.13
BVC-4A	75	42⅜	29½	47,500	....	....	1	Tecumseh	4	PFB400	1—3	230/208/220	5.70
BVC-5A	75	42⅜	29¼	124,000	....	....	1	Tecumseh	5	PFB500	1—3	230/208/220	7.18
These are blower-evaporator units with remote high side.													
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio													
1003-4	83¾	35	19⅝	39,000	86,800	Steam	1	Airtemp	3	3003-2	1-3-3	208/220/230/440/550	3.69
1005-04	90¼	48⅛	19⅝	60,000	152,000	Steam	1	Airtemp	5	3006-2	1-3-3	208/220/230/440/550	6.0
1008-2	98¼	48⅛	19⅝	90,000	196,500	Steam	1	Airtemp	7½	3008-1	2—3	208/220/440/550	8.05
1011	97	58	28	132,000	318,000	Steam	1	Airtemp	10	3011-1	2—3	208/220/440/550	14.15
1015	105	58	32	180,000	318,000	Steam	1	Airtemp	15	3015-1	2—3	208/220/440/550	16.73
2530-1	104	96	34	288,000	480,000	Steam	2	Airtemp	10	3011-1	2—3	208/220/440/550	....
2535-1	104	96	34	321,000	600,000	Steam	2	Airtemp	10-15	3011-1, 3015-1	2—3	208/220/440/550	....
2530-1	104	96	34	354,000	720,000	Steam	2	Airtemp	15	3015-1	2—3	208/220/440/550	....
2540	98	136	54	480,000	1,022,000	Steam, HW	1	Airtemp	40	2106-1	2—3	208/220/440/550	....
2545	98	126	54	540,000	1,140,000	Steam, HW	2	Airtemp	15	3015-1	2—3	208/220/440/550	....
2560	112	150	98	696,000	1,558,000	Steam, HW	1	Airtemp	60	2107-1	2	208/220/440/550	....
2575	113½	180	70	836,000	1,970,000	Steam, HW	2	Airtemp	75	2108-1	2	208/220/440/550	....
2500	113½	180	70	1,200,000	2,400,000	Steam, HW	2	Airtemp	100	2112-1	2	208/220/440/550	....
1102-02	23½	29½	36⅝	21,000	....	....	1	Tecumseh	2	B21T18	1	230	2.46
1108-3	27⅝	45	58⅝	33,000	....	....	1	Tecumseh	3	JE300	1—3	230/220	4.97
3705-00	80¼	48⅛	19⅝	55,500	152,000	Steam, HW	1	Airtemp	5	3006-2	1-3-3	230/208/220/440/550	6.6
3708-00	88¼	48⅛	19⅝	73,000	196,000	Steam, HW	1	Airtemp	7½	3008-1	2—3	208/220/440/550	8.95
3711-00	97	58	28	113,000	318,000	Steam, HW	1	Airtemp	10	3011-1	2—3	208/220/440/550	14.1
3715-00	105	58	32	154,200	318,000	Steam, HW	1	Airtemp	15	3015-1	2—3	208/220/440/550	18.4
2530-2	104	96	34	242,000	480,000	Steam, HW	2	Airtemp	10	3011-1	2—3	208/220/440/550	....
2535-2	104	96	34	276,000	600,000	Steam, HW	2	Airtemp	10-15	3011-1, 3015-1	2—3	208/220/440/550	....
2530-2	104	96	34	312,000	720,000	Steam, HW	2	Airtemp	15	3015-1	2—3	208/220/440/550	....
2630*	99	133	42	264,000	562,000	Steam, HW	2	Airtemp	10	3011-1	2—3	208/220/440/550	....
2635*	99	133	43	319,000	636,000	Steam, HW	2	Airtemp	10-15	3011-1, 3015-1	2—3	208/220/440/550	....
2630*	99	133	42	362,000	705,000	Steam, HW	2	Airtemp	15	3015-1	2—3	208/220/440/550	....
2640*	98	194	54	480,000	1,022,000	Steam, HW	1	Airtemp	40	2106-1	2—3	208/220/440/550	....
2645*	98	194	54	540,000	1,140,000	Steam, HW	2	Airtemp	15	3015-1	2—3	208/220/440/550	....
2660*	112	230	98	696,000	1,558,000	Steam, HW	1	Airtemp	60	2107-1	2	208/220/440/550	....
3675*	113½	306	70	836,000	1,970,000	Steam, HW	2	Airtemp	75	2108-1	2	208/220/440/550	....
*These models include attached evaporative condenser. †High velocity.													
Alco Airmaster—Alco Refrigeration Sales & Service, Inc., 3952 St. Clair Ave., Cleveland 14, Ohio													
CH 750	46	42	110	90,000	225,000	Gas	1	B-W	7½	PH750	3	208/230	....
Alton—Alton Mfg. Co., 1112 Ross Ave., Dallas 2, Texas													
RE-10	66	96	36	125,100	*	Steam/Water	1	Schnacke	10	T	3	220/440	7.7
RE-15	74½	120⅝	48¼	184,810	*	Steam/Water	1	Schnacke	15	T	3	220/440	11.5
RE-20	80½	128⅝	48¼	235,000	*	Steam/Water	1	Schnacke	20	F	3	220/440	15.7
RE-25	80½	128⅝	48¼	316,600	*	Steam/Water	1	Schnacke	25	F	3	220/440	20.8
RE-30	80½	148⅝	48¼	380,000	*	Steam/Water	1	Schnacke	30	F	3	220/440	24.6
RE-40	94½	192	62¼	462,000	*	Steam/Water	1	Schnacke	40	E	3	220/440	30.2
RE-50	94½	192	62¼	612,000	*	Steam/Water	1	Schnacke	50	E	3	220/440	38.4
*Unit adaptable for use with external filter plenum and external heating coil at intake. Also adaptable for use with duct-type heaters. NOTE: Each unit has built in control panel with all wiring complete; evap. condenser has 100% prime surface all copper coil and jacket. Unit modified on order for outdoor installation.													
American Blower—American-Standard Industrial Div., Detroit 32, Mich.													
3C7	66⅝	42	24	36,000	90,500*	Steam/Water	1	Carrier	3	6D-26	1—3	230/208-220/440	....
5C7	66⅝	42	24	60,000	126,000*	Steam/Water	1	Carrier	5	6D-45	1—3	230/208-220/440	....
8C7	67⅛	50	30	90,000	192,000*	Steam/Water	1	Carrier	7½	6D-46	3	208-220/440	....
10C7	67⅛	66	30	120,000	258,500*	Steam/Water	1	Carrier	10	6D-46	3	208-220/440	....
10D7	67⅛	66	30	120,000	258,500*	Steam/Water	2	Carrier	5	6D-45	2	208-220/440	....
15D7	113	84	31½	180,000	385,500*	Steam/Water	2	Carrier	7½	6D-46	2	208-220/440	....
20D7	112	108	31½	240,000	513,500*	Steam/Water	2	Carrier	10	6D-46	2	208-220/440	....
5CA8	66⅝	42	24	52,000	126,000*	Steam/Water	1	Carrier	5	6D-45	1—3	230/208-220/440	....
8CA8	67⅛	50	30	80,000	192,000*	Steam/Water	1	Carrier	7½	6D-46	3	208-220/440	....
10CA8	67⅛	66	30	105,000	258,500*	Steam/Water	1	Carrier	10	6D-46	3	208-220/440	....
10DA8	67⅛	66	30	105,000	258,500*	Steam/Water	2	Carrier	5	6D-45	3	208-220/440	....
15DA8	113	84	31½	160,000	385,500*	Steam/Water	2	Carrier	7½	6D-46	3	208-220/440	....
20DA8	113	108	31½	210,000	513,000*	Steam/Water	2	Carrier	10	6D-46	3	208-220/440	....
*3-row steam coil at 70° entering air, 2 p.s.i.g. steam. Also available with 1-row steam coil 1, 2-row hot water coil at lower capacities. 208/220 volt units cannot be adapted to 440 volts. †Includes 25 ft. of interconnected tubing. ‡Does not include remote condenser.													
American-Standard—American-Standard Air Conditioning Div., 40 W. 40th St., New York 18, N. Y.													
CCA-3	82	26½	21⅞	35,680	....	....	1	Tecumseh	3	....	3	208/220	2.52
CCA-3	82	36⅝	21⅞	36,020	....	....	1	Tecumseh	3	....	3	208/220	3.62
CCA-5	88	43⅝	21⅞	62,900	....	....	1	York	5	....	3—3	220/208/220	5.06

Commercial

Model No.	Condenser Type	Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant Charge No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
ACI—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.																
U-ACI-30	Shell-Coil	Water	1½	2.7	4	R-12/22	11	X Valve	1	1,200	680	½	1	P	14½x25½x1	764
U-ACI-50	Shell-Coil	Water	1½	4.4	4	R-12/22	13	X Valve	1	2,000	680	½	1	P	18½x34⅝x1	925
U-ACI-75	Shell-Coil	Water	1½	6.7	4	R-12/22	16	X Valve	2	3,000	720 (2)	½	2	P	19½x25½x1	1,167
U-ACI-100	Shell-Coil	Water	1½	9.0	4	R-12/22	26	X Valve	2	4,000	680 (2)	½	2	P	29½x23½x1	1,561
U-ACI-150	Shell-Coil	Water	1½	13.5	4	R-12/22	32	X Valve	3	6,000	760 (2)	¾	3	P	1—14½x29½x1, 2—29½x29¼x1	3,100
U-ACI-200	Shell-Coil	Water	1½	13.5	6	R-22	50	X Valve	3	8,000	1,000 (2)	1	3	P	1—14½x29½x1, 2—29½x28¾x1	4,200
Acme—Acme Industries, Inc., Jackson, Mich.																
ASC-3	Shell & Coil	Water	3.66	3.84	3	R-22	9	....	1	1,200	650	½	2	D	16x20	770
ASC-5	Shell & Coil	Water	3.55	5.22	3	R-22	12	....	1	2,000	840	½	3	D	20x20	900
ASC-8	Shell & Coil	Water	3.19	8.36	3	R-22	14	....	2	3,000	850	¾	3	D	16x25	1,260
ASC-10	Shell & Coil	Water	3.56	13.0	3	R-22	26	....	2	4,000	800	1½	8	D	16x30, 20x20	2,050
ASC-15	Shell & Coil	Water	3.04	13.0	4	R-22	38	....	2	6,000	790	2	8	D	16x30, 20x20	2,530
ASC-3A	Fin & Tube	Air	....	3.84	3	R-22	19	....	1	1,200	650	½	2	D	16x20	1,170
ASC-5A	Fin & Tube	Air	....	5.22	3	R-22	24	....	1	2,000	840	½	3	D	20x20	1,380
ASC-8A	Fin & Tube	Air	....	8.36	3	R-22	30	....	2	3,000	850	¾	3	D	16x25	1,803
ASC-15A	Fin & Tube	Air	....	13.0	3	R-22	60	....	2	6,000	790	2	8	D	16x20, 20x20	3,850
PACE-20A	Evaporative	Air	....	13.3	4	R-22	76	....	2	8,000	863	3	6	P	20x20	5,105
PACE-D30A	Evaporative	Air	....	13.3	4	R-22	76	....	2	8,000	863	3	6	P	20x20	5,225
PACE-25A	Evaporative	Air	....	16.7	4	R-22	98	....	2	10,000	700	5	6	P	20x25	5,980
PACE-D25A	Evaporative	Air	....	16.7	4	R-22	98	....	2	10,000	700	5	6	P	20x25	6,440
PACE-30A	Evaporative	Air	....	20	4	R-22	121	....	2	12,000	635	5	8	P	20x20	6,885
PACE-D30A	Evaporative	Air	....	20	4	R-22	121	....	2	12,000	635	5	8	P	20x20	7,610
PACE-40A	Evaporative	Air	....	26.6	4	R-22	162	....	2	16,000	540	7½	12	P	25x16	8,175
PACE-D40A	Evaporative	Air	....	26.6	4	R-22	162	....	2	16,000	540	7½	12	P	25x16	9,500
PACE-50A	Evaporative	Air	....	33.3	4	R-22	208	....	2	20,000	455	7½	10	P	25x20	9,885
PACE-D50A	Evaporative	Air	....	33.3	4	R-22	208	....	2	20,000	455	7½	10	P	25x20	11,335
PACE-60A	Evaporative	Air	....	40	4	R-22	238	....	2	24,000	473	10	21	P	30x16	12,125
PACE-D60A	Evaporative	Air	....	40	4	R-22	238	....	2	24,000	473	10	21	P	30x16	13,625
PACW-20A	Shell & Tube	Water	3	13.3	4	R-22	36	....	2	8,000	863	3	6	P	20x20	4,025
PACW-D20A	Shell & Tube	Water	3	13.3	4	R-22	36	....	2	8,000	863	3	6	P	20x20	4,075
PACW-25A	Shell & Tube	Water	3	16.7	4	R-22	43	....	2	10,000	700	5	6	P	20x25	4,740
PACW-D25A	Shell & Tube	Water	3	16.7	4	R-22	43	....	2	10,000	700	5	6	P	20x25	5,315
PACW-30A	Shell & Tube	Water	3	30	4	R-22	52	....	2	12,000	635	5	8	P	20x20	5,785
PACW-D30A	Shell & Tube	Water	3	30	4	R-22	52	....	2	12,000	635	5	8	P	20x20	6,310
PACW-40A	Shell & Tube	Water	3	26.6	4	R-22	71	....	2	16,000	540	7½	12	P	20x16	6,650
PACW-D40A	Shell & Tube	Water	3	26.6	4	R-22	71	....	2	16,000	540	7½	12	P	20x16	7,850
PACW-50A	Shell & Tube	Water	3	33.3	4	R-22	87	....	2	20,000	455	7½	10	P	25x20	7,585
PACW-D50A	Shell & Tube	Water	3	33.3	4	R-22	87	....	2	20,000	455	7½	10	P	25x20	9,435
PACW-60A	Shell & Tube	Water	3	40	4	R-22	105	....	2	24,000	473	10	21	P	20x14	9,860
PACW-D60A	Shell & Tube	Water	3	40	4	R-22	105	....	2	24,000	473	10	21	P	20x14	11,260
AFCO Comfortmaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																
BHC-2A1	Tube & Fin	Air	....	2.34	3	R-22	....	Cap.	1	800	....	½	1	P	20x25x1	545
BHC-3A	Tube & Fin	Air	....	2.8	4	R-22	....	Cap.	1	1,200	....	½	1	P	20x25x1	585
BHC-4A	Tube & Fin	Air	....	4.13	3	R-22	....	Cap.	2	1,600	....	½	2	P	20x20x1	735
BHC-5A	Tube & Fin	Air	....	4.13	4	R-22	....	Cap.	2	2,000	....	½	2	P	20x20x1	980
BHC-85A	Tube & Fin	Air	....	8.0	3	R-22	....	Cap.	1	3,000	....	¾	2	P	20x27x1	1,485
BHC-120A	Tube & Fin	Air	....	8.0	4	R-22	....	Cap.	1	4,000	....	¾	2	P	20x27x1	1,800
BVC-2A1	Tube & Fin	Air	....	2.34	3	R-22	....	Cap.	1	800	....	½	1	P	20x25x1	....
BVC-3A	Tube & Fin	Air	....	2.8	4	R-22	....	Cap.	1	1,200	....	½	1	P	20x25x1	....
BVC-4A	Tube & Fin	Air	....	4.13	3	R-22	....	Cap.	2	1,600	....	½	2	P	20x20x1	....
BVC-5A	Tube & Fin	Air	....	4.13	4	R-22	....	Cap.	2	2,000	....	½	2	P	20x20x1	....
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																
1003-4	Shell & Tube	Water	1.5	3.21	3	R-22	9	X Valve	1	1,220	900	¼	1	D	15x20¾	580
1005-04	Shell & Tube	Water	1.5	5.3	3	R-22	12	X Valve	2	3,000	680	½	2	D	22x22	781
1008-2	Shell & Tube	Water	1.5	5.3	3	R-22	12	X Valve	2	3,000	1,080	1	2	D	22x22	1,061
1011	Shell & Tube	Water	1.5	7.46	3	R-22	19½	X Valve	2	4,060	785	1½	6	P	16¾x18	1,385
1015	Shell & Tube	Water	1.5	12.08	3	R-22	30	X Valve	2	5,980	610	2	8	P	2—16x24, 6—16¾x18	1,675
2530-1	Shell & Tube	Water	1.5	17.5	4	R-22	39.0	X Valve	2	8,750	480	2	8	†	6—16x20, 2—16x25	3,100
2535-1	Shell & Tube	Water	1.5	17.5	4	R-22	49.5	X Valve	2	10,000	530	3	8	†	6—16x20, 2—16x25	3,120
2530-1	Shell & Tube	Water	1.5	17.5	4	R-22	60.0	X Valve	2	12,000	590	5	8	†	6—16x20, 2—16x25	3,170
2540	Shell & Tube	Water	3	28	4	R-22	125	X Valve	3	14,000	600	5	12	P	16x25	6,750
2545	Shell & Coil	Water	3	28	4	R-22	80	X Valve	3	16,000	672	5	12	P	16x25	6,750
2560	Shell & Tube	Water	3	42	4	R-22	180	X Valve	3	21,000	453	7½	24	P	16x20	8,620
2575	Shell & Tube	Water	3	53	4	R-22	225	X Valve	4	28,200	446	10	24	P	16x20	14,100
2500	Shell & Tube	Water	3	70	4	R-22	300	X Valve	4	35,000	513	15	24	P	20x25	17,000
1102-02	Tube & Fin	Air	....	2.53	2	R-22	3.5	Cap.	1	750	1,125	¼	....	....	....	300
1108-3	Tube & Fin	Air	....	3.21	3	R-22	5.05	Cap.	1	1,200	1,125	½	....	....	....	592
3705-00	Shell & Coil	Water	1.5	5.3	3	R-22	....	X Valve	2	3,000	680	½	2	D	22x22	....
3708-00	Shell & Coil	Water	1.5	5.3	3	R-22	....	X Valve	2	3,000	1,080	1	2	D	22x22	....
3711-00	Shell & Coil	Water	1.5	7.46	3	R-22	....	X Valve	2	4,060	785	1½	6	P	16¾x18	....
3715-00	Shell & Coil	Water	1.5	12.08	3	R-22	....	X Valve	2	5,980	610	2	8	P	2—16x24, 6—16¾x18	....
2530-2	Tube & Fin	Air	....	17.5	4	R-22	....	X Valve	2	8,750	480	2	8	†	6—16x20, 2—16x25	....
2535-2	Tube & Fin	Air	....	17.5	4	R-22	....	X Valve	2	10,000	530	3	8	†	6—16x20, 2—16x25	....
2530-2	Tube & Fin	Air	....	17.5	4	R-22	....	X Valve	2	12,000	590	5	8	†	6—16x20, 2—16x25	....
2630*	Evaporative	Air	....	16.1	4	R-22	50	X Valve	2	8,750	610	3	6	P	16x20	4,600
2635*	Evaporative	Air	....	16.1	4	R-22	60	X Valve	2	10,000	665	3	6	P	20x20	4,620
2630*	Evaporative	Air	....	17.2	4	R-22	70	X Valve	2	12,000	725	5	6	P	20x20	4,700
2640*	Evaporative	Air	....	28	4	R-22	125	X Valve	3	14,000	600	5	12	P	16x25	8,000
2645*	Evaporative	Air	....	28	4	R-22	105	X Valve	3	16,000	672	5	12	P	16x25	8,000
2660*	Evaporative	Air	....	42	4	R-22	180	X Valve	3	21,000	462	7½	24	P	16x20	10,700
3675*	Evaporative	Air	....	53	4	R-22	225	X Valve	4	28

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Kw. Input
Armstrong—Armstrong Furnace, 851 W. Third Ave., Columbus, Ohio													
CUC	77	38	21½	36,000	—	—	1	Copeland	3	96-300, LRH-300	1—3	230-208/230	—
CUD	85⅝	45½	26	60,000	—	—	1	Copeland	5	MF-500, MRF 500	1—3	230-208/230	—
CUE	87⅝	55½	29½	90,000	—	—	1	Copeland	7½	9RS-750	3	220	—
CUF	87⅝	72	29½	120,000	—	—	2	Copeland	10	MRF 500	3	220	—
CUG	99⅝	86	29½	180,000	—	—	3	Copeland	15	9RS-750	3	220	—
Barkow Weatherwise—Aug. G. Barkow Mfg. Co., 2230 S. 43rd St., Milwaukee 46, Wis.													
CE3-A	73	21	21	21,750	—	—	1	Tecumseh	2	—	1	230	4.99
CE3-A	73	21	21	36,700	—	—	1	Tecumseh	3	—	1—3	230/230/208	5.89-4.46
CE5-A	75½	28⅝	23½	58,300	—	—	1	Tecumseh	5	—	1—3	230/230/208	8.81-6.76
CE5-A	75½	28⅝	23½	58,300	—	—	1	Copeland	5	—	1—3	230/230/208	7.33-6.62
CE75-A	79½	52⅛	23½	90,500	—	—	2	Copeland	7½	—	3	230/208	10.68
CE3-W	63	21	21	32,550	—	—	1	Tecumseh	3	—	1	230	4.19
CE3-W	63	21	21	37,500	—	—	1	Tecumseh	3	—	1—3	230/230/208	5.82-3.75
CE5-W	78½	28⅝	23½	68,200	—	—	1	Tecumseh	5	—	1—3	230/230/208	6.56-6.27
CE5-W	78½	28⅝	23½	63,200	—	—	1	Copeland	5	—	1—3	230/230/208	6.13-4.28
CE75-W	79½	52⅝	29½	92,500	—	—	1	Copeland	7½	—	3	230/208	7.26
CE100-W	84	60	27	122,500	—	—	2	Tecumseh	5	—	3	230/208	10.74
Capitolaire—National-U. S. Radiator Corp., 944 Ash St., Johnstown, Pa.													
COM-2W-48	71⅝	30	22	36,000	—	Opt.	1	Tecumseh	3	JE300	1—3	230/208/220	—
COM-2A-48	71⅝	30	22	36,000	—	Opt.	1	Tecumseh	3	JE300	1—3	230/208/220	—
COM-2W-60	74⅝	40	24	60,000	—	Opt.	1	Tecumseh	5	FB500	1—3	230/208/220	—
COM-2A-60	74⅝	40	24	60,000	—	Opt.	1	Tecumseh	5	FB500	1—3	230/208/220	—
COM-1W-48	90⅝	55½	29½	90,000	—	Opt.	1	Copeland	7½	MRG-750	3	208/220/440	—
COM-1A-48	90⅝	55½	29½	90,000	—	Opt.	1	Copeland	7½	MRG-750	3	208/220/440	—
COM-1W-10	90⅝	72	29½	120,000	—	Opt.	1	Copeland	10	9RS-1000	3	208/220/440	—
COM-1A-10	90⅝	72	29½	120,000	—	Opt.	1	Copeland	10	9RS-1000	3	208/220/440	—
COM-1W-15	93⅝	86	29½	180,000	—	Opt.	2	Copeland	7½	MRG-750	3	208/220/440	—
COM-1A-15	93⅝	86	29½	180,000	—	Opt.	2	Copeland	7½	MRG-750	3	208/220/440	—
COM-1W-20	93⅝	86	29½	240,000	—	Opt.	2	Copeland	10	9RS-1000	3	208/220/440	—
COM-1A-20	93⅝	86	29½	240,000	—	Opt.	2	Copeland	10	9RS-1000	3	208/220/440	—
CEN-1W-A5H	58⅝†	53¼	38½	90,000	214,000	HW, Steam	1	Copeland	7½	MRG-750	3	208/220/440	—
CEN-1W-A10H	67⅝†	70¾	41¼	120,000	285,000	HW, Steam	2	Copeland	10	9RS-1000	3	208/220/440	—
CEN-1W-B15H	73½†	73⅛	41¼	180,000	427,000	HW, Steam	2	Copeland	7½	MRG-750	3	208/220/440	—
CEN-1W-B20H	82⅜†	87⅛	51¼	240,000	574,000	HW, Steam	2	Copeland	10	9RS-1000	3	208/220/440	—
CEN-1W-C25H	83⅜†	87⅛	51¼	300,000	715,000	HW, Steam	3	Copeland	(2) 7½ (1) 10	MRG-750, 9RS-1000	3	208/220/440	—
CEN-1W-C30H	87⅜†	96⅛	58⅛	360,000	687,000	HW, Steam	3	Copeland	10	9RS-1000	3	208/220/440	—
CEN-1W-D40H	93⅜†	130⅛	58⅛	480,000	1,146,000	HW, Steam	4	Copeland	10	9RS-1000	3	208/220/440	—
CEN-1W-D60H	96⅜†	134⅛	68⅛	600,000	1,431,000	HW, Steam	4	Brun-met.	(2) 10 (3) 15	100-HF, 150-HF	3	208/220/440	—
CEN-1W-D80H	101⅝†	139⅛	68⅛	720,000	1,718,000	HW, Steam	4	Brun-met.	15	150-HF	3	208/220/440	—

†Without plenum. 16 row optional. *Unit only. §Shipping weight—net is approximately 8% less.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Armstrong—Armstrong Furnace, 851 W. Third Ave., Columbus, Ohio																
CUC	Shell & Coil	Water	4	2.9	3	R-22	4	X Valve	1	1,200	—	¼	1	P	19x28⅞	302
CUD	Shell & Coil	Water	4	4.7	3	R-22	9	X Valve	1	2,000	—	½	2	P	22x17	1,050
CUE	Shell & Coil	Water	4	6.55	4	R-22	12	X Valve	1	3,000	—	¾	2	P	26½x20½	1,420
CUF	Shell & Coil	Water	4	8.55	4	R-22	24	X Valve	2	4,000	—	1½	2	P	26½x20½	1,125
CUG	Shell & Coil	Water	4	12.1	4	R-22	34	X Valve	2	6,000	—	2	2	P	26½x24½	2,042
Barkow Weatherwise—Aug. G. Barkow Mfg. Co., 2230 S. 43rd St., Milwaukee 46, Wis.																
CE3-A	Fin Tube	Air	—	2.66	4	R-22	7½	X Valve	1	1,200	661	½	1	P	16x25	480
CE3-A	Fin Tube	Air	—	2.66	4	R-22	7½	X Valve	1	1,200	661	½	1	P	16x25	480
CE5-A	Fin Tube	Air	—	3.75	4	R-13	24	X Valve	1	2,000	490	¾	2	P	15x20	880
CE5-A	Fin Tube	Air	—	3.75	4	R-22	24	X Valve	1	2,000	490	¾	2	P	15x20	880
CE75-A	Fin Tube	Air	—	5.62	4	R-22	18	X Valve	2	3,000	618	¾	2	P	15x20	880
CE3-W	Tube-in-Tube	Water	—	2.66	4	R-22	3	Cap.	1	800	661	¼	1	P	16x25	1,015
CE3-W	Tube-in-Tube	Water	—	2.66	4	R-22	3	Cap.	1	1,200	661	¼	1	P	16x25	480
CE5-W	Shell & Tube	Water	—	3.75	4	R-22	6	Cap.	1	2,000	490	¾	2	P	15x20	880
CE5-W	Shell & Tube	Water	—	3.75	4	R-22	6	Cap.	1	2,000	490	¾	2	P	15x20	880
CE75-W	Shell & Tube	Water	—	5.62	4	R-22	12	X Valve	2	3,000	618	¾	2	P	15x20	880
CE100-W	Shell & Tube	Water	—	7.8	4	R-22	13	Cap.	2	2,800	490	(2) ¾	2	P	16x20	1,225
Capitolaire—National-U. S. Radiator Corp., 944 Ash St., Johnstown, Pa.																
COM-2W-48	Shell & Tube	Water	3	2.9	3	R-22	4	X Valve	1	1,200	800	¾	1	P	19x24x1	700*
COM-2A-48	Fin Coil	Air	—	2.9	3	R-22	11	X Valve	1	1,200	800	¾	1	P	19x24x1	700*
COM-2W-60	Shell & Coil	Water	3.7	4.7	3	R-22	9	X Valve	1	2,000	800	¾	2	P	22x17x1	850*
COM-2A-60	Fin Coil	Air	—	4.7	3	R-22	19	X Valve	1	2,000	800	¾	2	P	22x17x1	850*
COM-1W-48	Shell & Coil	Water	3.7	6.55	4	R-22	13	X Valve	1	3,000	980	¾	2	P	27x27x1, 27x20x1	1,340*
COM-1A-48	Fin Coil	Air	—	6.55	4	R-22	34	X Valve	1	3,000	980	¾	2	P	27x27x1, 27x20x1	1,340*
COM-1W-10	Shell & Coil	Water	3.7	8.55	4	R-22	20	X Valve	2	4,000	980	1½	2	P	27x20x1	1,900*
COM-1A-10	Fin Coil	Air	—	8.55	4	R-22	58	X Valve	2	4,000	980	1½	2	P	27x20x1	1,900*
COM-1W-15	Shell & Coil	Water	2.7	12.1	4	R-22	(3) 12	X Valve	2	6,000	750	2	2	P	27x26x1	2,450*
COM-1A-15	Fin Coil	Air	—	12.1	4	R-22	(3) 34	X Valve	2	6,000	750	2	2	P	27x26x1	2,450*
COM-1W-20	Shell & Tube	Water	3	12.1	5	R-22	(3) 20	X Valve	2	8,000	900	3	2	P	27x26x1	2,700*
COM-1A-20	Fin Coil	Air	—	12.1	5	R-22	(3) 52	X Valve	2	8,000	900	3	2	P	27x26x1	2,700*
CEN-1W-A5H	Shell & Tube	Water	3	6.0	42	R-22	15	X Valve	1	2,000	—	1	—	Opt.	—	2,000§
CEN-1W-A10H	Shell & Tube	Water	3	8.0	42	R-22	18	X Valve	2	4,000	—	1½	—	Opt.	—	2,300§
CEN-1W-B15H	Shell & Tube	Water	3	12.0	42	R-22	(2) 15	X Valve	2	6,000	—	2	—	Opt.	—	2,450§
CEN-1W-B20H	Shell & Tube	Water	3	16.0	42	R-22	(2) 18	X Valve	2	8,000	—	3	—	Opt.	—	3,410§
CEN-1W-C25H	Shell & Tube	Water	3	19.2	42	R-22	(1) 18 (2) 15	X Valve	3	10,000	—	3	—	Opt.	—	4,180§
CEN-1W-C30H	Shell & Tube	Water	3	23.0	42	R-22	(3) 18	X Valve	3	12,000	—	5	—	Opt.	—	4,530§
CEN-1W-D40H	Shell & Tube	Water	3	30.6	42	R-22	(4) 18	X Valve	3	16,000	—	5	—	Opt.	—	6,480§
CEN-1W-D60H	Shell & Tube	Water	3	39.3	42	R-22	(2) 25 (2) 40	X Valve	3	20,000	—	7½	—	Opt.	—	6,600§
CEN-1W-D80H	Shell & Tube	Water	3	47.8	42	R-22	(4) 40	X Valve	3	24,000	—	10	—	Opt.	—	7,700§

†Without plenum. 16 row optional. *Unit only. §Shipping weight—net is approximately 8% less.

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Kw. Input
Climate Changer—The Trane Co., La Crosse, Wis.													
BC2	64½	32	22½	32,800	—	Steam, HW	1	—	3	—	1—3	208/220	—
BC5	64½	38¼	34	60,600	—	Steam, HW	1	—	5	—	1—3	208/220/440	—
BC7	85½	41	29	88,000	—	Steam, HW	1	—	7½	—	3	208/220/440	—
BC10	85½	72	34	121,000	—	Steam, HW	2	—	5	—	3	208/220/440	—
BC15	97½	77	39	177,000	—	Steam, HW	2	—	7½	—	3	208/220/440	—
BC20	69½	73	41½	244,000	—	Steam, HW	1	—	20	—	3	208/220/440	—
BC25	69½	89	41½	306,000	—	—	1	—	25	—	3	208/220/440	—
BC30	69½	129	41½	367,000	—	—	1	—	30	—	3	208/220/440	—
BA3	84½	32	22½	31,300	—	Steam, HW	1	—	3	—	1—3	208/220	—
BA5	84½	38¼	34	48,000	—	Steam, HW	1	—	5	—	1—3	208/220/440	—
BA7	93½	41	39	75,000	—	Steam, HW	1	—	7½	—	3	208/220/440	—
BA10	93½	72	34	96,000	—	Steam, HW	2	—	5	—	3	208/220/440	—
BA15	97½	77	39	150,000	—	Steam, HW	2	—	7½	—	3	208/220/440	—

*In condenser.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Climate Changer—The Trane Co., La Crosse, Wis.																
BC2	Co-Axial	Water	—	2.40	2	R-22	4	X Valve	1	1,200	726-1,113	½	1	D	16x25	300
BC5	Co-Axial	Water	—	3.94	2	R-22	6	X Valve	1	2,000	655-1,000	¾	2	D	16x20	480
BC7	Co-Axial	Water	—	5.44	2	R-22	8	X Valve	1	3,000	628- 904	1½	2	D	16x25	570
BC10	Co-Axial	Water	—	7.88	2	R-22	12	X Valve	2	4,000	753-1,000	2	4	D	16x20	1,480
BC15	Co-Axial	Water	—	10.88	3	R-22	16	X Valve	3	6,000	680- 979	3	4	D	16x25	1,920
BC20	Shell & Tube	Water	—	15.7	2	R-22	40	X Valve	2	8,000	743-1,068	3	7	P	16x30	2,620
BC25	Shell & Tube	Water	—	19.7	2	R-22	45	X Valve	2	10,000	783-1,013	5	9	P	16x30	2,900
BC30	Shell & Tube	Water	—	24.0	2	R-22	50	X Valve	3	13,000	853- 943	5	11	P	16x30	3,200
BA3	Fin Tube	Air	—	2.40	2	R-22	•	X Valve	1	1,200	726-1,113	½	1	D	16x25	480
BA5	Fin Tube	Air	—	3.94	2	R-22	•	X Valve	1	2,000	655-1,000	¾	2	D	16x20	650
BA7	Fin Tube	Air	—	5.44	3	R-22	•	X Valve	1	3,000	628- 904	1½	2	D	16x25	920
BA10	Fin Tube	Air	—	7.88	2	R-22	•	X Valve	2	4,000	753-1,000	2	4	D	16x20	1,350
BA15	Fin Tube	Air	—	10.88	2	R-22	•	X Valve	2	6,000	680- 978	3	4	D	16x25	1,800

Cool Heat—Drying Systems Co., 1800 Foster Ave., Chicago 40, Ill.																
CH-10-3-22	66	64	78	122,800	130,000	Electric	1	Copeland	10	9RS-1000	3	230	—	—	Air	—	9	4	R-22	30	X Valve	—	3,000	—	1	4	D	20x25	2,900
CH-15-3-22	66	64	78	175,000	180,000	Electric	2	Copeland	15	MRG-750	3	230	—	—	Air	—	9	6	R-22	35	X Valve	—	4,500	—	2	4	D	20x25	3,400
CH-20-3-22	66	64	90	245,000	260,000	Electric	2	Copeland	20	9RS-1000	3	230	—	—	Air	—	11.25	6	R-22	50	X Valve	—	6,000	—	3	6	D	20x25	3,900

Crane—Crane Co., 836 So. Michigan, Chicago, Ill.																
U-ACI-30	78	35½	25½	36,000	130,000	Steam	1	Copeland	3	—	1—3	230/208/220/440	—	Shell & Coil	Water	3	2.7	4	R-12	11	X Valve	1	1,200	680	½	1	P	14⅝x25⅝	841†
U-ACI-50	83½	44⅝	26⅝	61,000	230,000	Steam	1	Copeland	5	—	1-3-3	230/208/220/440	—	Shell & Coil	Water	3	4.4	4	R-12	13	X Valve	1	2,000	680	½	1	P	18½x34⅝	1,013†
U-ACI-75	93	51	30½	92,000	352,000	Steam	1	Copeland	7½	—	3—3	208/220/440	—	Shell & Coil	Water	3	6.7	4	R-12	16	X Valve	2	3,000	720	½	2	P	19½x26½	1,279†
U-ACI-100	89½	57	30½	121,000	461,000	Steam	2	Copeland	5	—	3—3	208/220/440	—	Shell & Coil	Water	3	9.0	4	R-12	26	X Valve	2	4,000	680	½	2	P	23½x29¼	1,705†
U-ACI-150	93½	70	31¼	182,000	558,900	Steam	2	Copeland	7½	—	3—3	208/220/440	—	Shell & Coil	Water	3	13.5	5	R-12	32	X Valve	2	6,000	700	¾	3	P	14⅝x29¼, 22¼x29¼	2,250†

†Approximate shipping weight.

Curtis—Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 20, Mo.																
CPU-600	78¼	25¾	22	58,040	62,300	Steam/Water	1	Copeland	3	3RO-300	1—3	230/208/220/440†	4.73	Counterflow	Water	3	3.2	4	R-22	3.6	Cap.	1	1,200	890	½	1	D	20x20	415
CPU-900	90¼	27⅞	25¾	62,400	155,500	Steam/Water	1	Copeland	5	LRG-500	1-3-3	230/208/220/440†	9.54	Counterflow	Water	3	4.15	4	R-22	5.5	Cap.	1	2,000	775	½	2	D	16x30	625
CPU-300	90¼	41⅛	25¾	86,100	234,000	Steam/Water	1	Copeland	7½	MRG-750	3—3	208/220/440/580	11.79	Counterflow	Water	3	6.25	4	R-22	8.5	Cap.	2	3,000	750	1	3	D	1—16x25, 1—20x25	980
CA-1200	98¾	54	34	126,800	311,000	Steam/Water	1	Copeland	10	9RS-1000	3—3	208/220/440/550	16.74	Shell & Coil	Water	3	8	4	R-22	15	X Valve	2	4,000	725	1	3	D	16x25	1,504
CA-1400	98¾	78	35	190,200	467,000	Steam/Water	2	Copeland	(2) 7½	MRG-750	3—3	208/220/440/550	22.42	Shell & Coil	Water	3	12	4	R-22	26	X Valve	3	6,000	780	1½	4	D	2—16x25, 2—20x25	2,086
CA-2200	107¾	78	39	253,600	622,000	Steam/Water	2	Copeland	(2) 10	9RS-1000	3—3	208/220/440/550	33.86	Shell & Coil	Water	3	16	4	R-22	30	X Valve	3	8,000	642	2	6	D	3—20x25, 3—16x25	3,576
CPU3500-30	109¾	104	36	310,000	698,000	Steam/Water	1	Curtis	25	M	3—3*	208/220/440/550	27.56	Shell & Coil	Water	3	16.5	4	R-12	—	X Valve	3	8,750	585	2	8	P	16x25	4,300
CPU3000-30	109¾	104	36	365,000	766,800	Steam/Water	1	Curtis	30	M	3—3*	208/220/440/550	33.10	Shell & Coil	Water	3	20.9	4	R-12	—	X Valve	3	10,000	582	3	8	P	16x25	4,540
CPU4000-40	99	126	55½	484,000	1,231,000	Steam/Water	1	Curtis	40	M	3—3*	208/220/440/550	42.80	Shell & Tube	Water	3	29.6	4	R-12	—	X Valve	3	14,800	582	5	10	P	20x25	5,740
CPU5000-50	99	126	55½	645,000	1,475,000	Steam/Water	1	Curtis	50	M	3—3*	208/220/440/550	54.90	Shell & Tube	Water	3	35.6	4	R-22	—	X Valve	3	17,780	582	7½	10	P	20x25	6,780

*Made specifically for 50-cycle operation. †Also available in 550 volts.

Custom-Temp and Mauer Electric Co.—Custom-Temp Corp., Liberty, N. Y.																
DM5-2	85⅝	40¾	24⅜	61,200	155,000	Steam**	1	Worthington	5	—	1—3	208/230	—	Shell & Coil‡	Water	—	4½	4	R-22	—	X Valve	1	2,000	—	½	2	P or D	20x25	—
DM7S	91⅝	46⅛	28⅝	96,000	232,000	Steam	1	Worthington	7½	—	3	208/230	—	Shell & Coil‡	Water	—	6½	4	R-22	—	X Valve	1	3,000	—	¾	2	P or D	20x25	—
DM10S	91⅝	54⅛	28⅝	122,000	305,000	Steam	2	Worthington	5	—	3	208/230	—	Shell & Coil‡	Water	—	8	4	R-22	—	X Valve	1	4,000	—	¾	2	P or D	16x25	—
DM15TS	108⅝	72⅛	34⅝	196,000	480,000	Steam	2	Worthington	7½	—	3	208/230	—	Shell & Coil‡	Water	—	12	4	R-22	—	X Valve	2	6,000	—	1½	4	P or D	16x25	—
HD-8	73½	46⅝	27½	8†	To Specs.	Steam	1	Brunner	7½	—	3	208/230	—	Shell & Coil‡	Water	—	6	4§	R-22	—	X Valve	1	2,000	—	¾	2	P or D	20x25	—
HD-10	73½	54⅛	28⅝	10†	To Specs.	Steam	1	Brunner	10	—	3	208/230	—	Shell & Coil‡	Water	—	8	4§	R-22	—	X Valve	1	4,000	—	1	3	P or D	16x25	—
HD-15-1	78½	72⅛	32½	15†	To Specs.	Steam	1	Brunner	15	—	3	208/230	—	Shell & Coil‡	Water	—	12	4§	R-22	—	X Valve	2	6,000	—	1½	4	P or D	16x25	—
HD-15-2	84½	72⅛	32½	14†	To Specs.	Steam	2	Brunner/Worth.	7½	—	3	208/230	—	Shell & Coil‡	Water	—	12	4§	R-22	—	X Valve	2	6,000	—	1½	4	P or D	16x25	—
HD-20-2	84½	72⅛	32½	20†	To Specs.	Steam	2	Brunner	10	—	3	208/230	—	Shell & Coil‡	Water	—	16	4§	R-22	—	X Valve	2	8,000	—	2	6	P or D	3—16x20, 4—16x25	—
HD-25-2	90½	96⅛	36¾	25†	To Specs.	Steam	2	Brunner	10-15	—	3	208/230	—	Shell & Coil‡	Water	—	20	4§	R-22	—	X Valve	2	10,000	—	5	8	P or D	20x20	—
HD-30-2	92½	96¼	44¼	30†	To Specs.	Steam	2	Brunner	15	—	3	208/230	—	Shell & Coil‡	Water	—	24	4§	R-22	—	X Valve	2	12,000	—	7½	12	P or D	16x20	—
HD-40-2	92¾	108⅛	48⅝	40†	To Specs.	Steam	3	Brunner	(2) 15-(1) 10	—	3	208/230	—	Shell & Coil‡	Water	—	32	4§	R-22	—	X Valve	3	16,000	—	7½	12	P or D	16x25	—
HD-45-3	93½	108⅛	48⅝	45†	To Specs.	Steam	3	Brunner	15	—	3	208/230	—	Shell & Coil‡	Water	—	36	4§	R-22	—	X Valve	3	18,000	—	7½	12	P or D	4—20x20, 6—16x20	—

**Optional hot water, electric, or gas. †Nominal tons. ‡Or double tube counterflow. §Optional 5-6 rows deep. Heavy duty, self-contained, air-cooled, completely charged air conditioners are available in 3, 5, 8, 10, 15, and 20-hp. model arranged for supply and return air ducts. Details not yet ready for release.

Dialaire, Dialatemp, Pentatemp—Dialatemp, Inc., 706 Chestnut St., St. Louis, Mo.																
WCD-15	86	96	32	15.1*	Opt.	Steam or HW	1	Dialaire	15	D155F60	3†	208/220/440	14.2	Shell & Tube	Water	1.5	12.1	4/6	R-22	26¼	X Valve	2	6,000	634	1½	2/4	F or D	20x20x2	3,600
WCD-20	96	110	36	20.2*	Opt.	Steam or HW	1	Dialaire	20	D205F60	3†	208/220/440	18.7	Shell & Tube	Water	1.5	15.5	4/6	R-22	35	X Valve	2	8,000	672	2	4/6	F or D	4—16x25x2, 6—16x20x2	4,100
WCD-25	96	110	36	25.2*	Opt.	Steam or HW	1	Dialaire	25	D255F60	3†	208/220/440	23.3	Shell & Tube	Water	1.5	20.4	4/6	R-22	43½	X Valve	2	10,000	535	3	4/6	F or D	4—16x25x2, 6—20x20x2	4,300
WCD-30	107	93	42	30.3*	Opt.	Steam or HW	1	Dialaire	30	D305H60	3†	208/220/440	27.3	Shell & Tube	Water	1.5	23.8	4/6	R-22	53½	X Valve	2	12,000	672	3	4/8	F or D	20x20x2	5,140
WCD-40	136	99	54	40.4*	Opt.	Steam or HW	1	Dialaire	40	D405H60	3†	208/220/440	36.8	Shell & Tube	Water	1.5	31.8	4/6	R-22	70	X Valve	2	16,000	540	5	10/20	F or D	10—20x25x2, 20—20x20x2	6,200
WCD-50	138	114	60	50.5*	Opt.	Steam or HW	1	Dialaire	50	D505H60	3†	208/220/440	44.9	Shell & Tube	Water	1.5	40.0	4/6	R-22	87½	X Valve	3	20,000	513	5	6/10	F or D	20x20x2	7,680
WCD-60	153	114	60	60.6*	Opt.	Steam or HW	1	Dialaire	60	D605H60	3†	208/220/440	53.0	Shell & Tube	Water	1.5	47.8	4/6	R-22	105	X Valve	3	24,000	516	5	9/15	F or D	20x20x2	8,900
WCD-75	172	122	70	75.8*	Opt.	Steam or HW	1	Dialaire	75	D755H80	3†	208/220/440	67.3	Shell & Tube	Water	1.5	59.8	4/6	R-22	131¼	X Valve	3	30,000	345	7½	16/20	F or D	16—16x20x2, 20—20x20x2	11,800
WCD-100	235	122	70	101.1*	Opt.	Steam or HW	1	Dialaire	100	D1005H120	3†	208/220/440	89.6	Shell & Tube	Water	1.5	79.8	4/6	R-22	175	X Valve	3	40,000	350	10	12/15	F or D	12—16x20x2, 16—20x20x2	13,200

*Capacity in Tons—105

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Kw. Input
Embassy—Embassy Steel Products, 890 Stanley Ave., Brooklyn 8, N. Y.													
EAC-30	78	35½	25½	36,000	120,000	Steam	1	Copeland	3	LRH-300	1-3-3	220/230	....
EAC-50	84	44⅝	26⅝	61,000	220,000	Steam	1	Copeland	5	MRF500	1-3-3	220/230	....
EAC-75	83	51	30½	93,000	353,000	Steam	1	Copeland	7½	9R8-750	2—3	220	....
EAC-100	89½	57	30½	121,000	401,000	Steam	2	Copeland	(2) 5	MRF500	2—3	220	....
EAC-150	92⅛	70	31½	182,000	558,900	Steam	2	Copeland	(2) 7½	9R8-750	2—3	220	....
EAC-200	92⅛	70	31½	242,000	558,900	Steam	2	Copeland	(2) 10	9R8-1000	2—3	220	....
FloatingAir—Friedrich Refrigerators, Inc., 1117 E. Commerce St., San Antonio, Texas													
C300W	78	26	26½	36,000	....	....	1	Tecumseh	3	JE-300	1—3	230-208/220	....
C500W	85¼	42¼	29½	60,000	....	Steam	1	Tecumseh	5	FB-500	1—3	230-208/220	....
C750W	85¼	42¼	29½	90,000	....	Steam	1	Copeland	7½	MRG-750	3	208/220	....
C300A	78	24	26½	31-36,000	....	....	1	Tecumseh	3	JE-300	1—3	230-208/220	....
C500A	85¼	42¼	29½	58-60,000	....	Steam	1	Tecumseh	5	FB-500	1—3	230-208/220	....
C750A	85¼	42¼	29½	83-90,000	....	Steam	1	Copeland	7½	MRG-750	3	208/220	....
Forston & Lincoln—The Forston Co., 1400 Conti St., Houston 2, Texas													
PEC-2	20¾	25¾	19	22,800	....	....	1	Tecumseh	2	B21U18	1	230	....
PEC-3	20¾	25¾	19	35,000	....	....	1	Tecumseh	3	JE300	1—3	230/220	....
PEC-5	31¾	37⅛	69	58,000	....	....	1	Tecumseh	5	FB500	1—3	230/220	....
Frick—Frick Co., Waynesboro, Pa.													
300	81	36	34½	38,000	96,300	Steam	1	....	3	....	3	220	3.56
530	84⅝	42	27⅛	62,000	164,300	Steam	1	....	5	....	3	220	6.07
750	88⅝	56	27⅛	92,250	235,500	Steam	1	....	7½	....	3	220	8.76
1000	96⅝	74	27⅛	124,000	328,400	Steam	2	....	10	....	3	220	12.14
1500	94⅞	85	27⅛	184,700	471,000	Steam	2	....	15	....	3	220	17.52
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio													
AZE-360	22½*	29½	42½	34,000	....	....	2	Frigidaire	....	....	1	208/230	5.35
AZE-300	75⅝	33	25½	40,000	96,000†	Steam†	1	Frigidaire	....	....	1—3	230/208/220/440	4.04
AZE-500	87⅝	36	25½	60,000	133,000†	Steam†	1	Frigidaire	....	....	1—3	230/208/220/440	6.38
AZE-750	87⅝	44½	25½	90,000	230,000†	Steam†	1	Frigidaire	....	....	3	208/220/440	9.2
AZE-1000	93⅝	67	29½	130,500	364,000†	Steam†	2	Frigidaire	....	....	3	208/220/440	12.04
AZE-1500	93⅝	67	29½	177,500	320,000†	Steam†	2	Frigidaire	....	....	3	208/220/440	16.81
Gaffers & Sattler—Utility Appliance Corp., 4851 S. Alameda St., Los Angeles, Calif.													
3TP-1, -3	34½	36	46⅝	38,000	....	....	1	Tecumseh	3	PJE300	1—3	230	4.0
Genatron—General Air Conditioning Corp., 4542 E. Dunham, Los Angeles 23, Calif.													
RO 31 HP	28½	30	25	27,700	68,500	Heat Pump*	1	Tecumseh	4	PJE300	1—3	208/220	....
RO 525 A	56⅝	40	36	48,500	92,300	Heat Pump*	1	Tecumseh	5	PFB500	1—3	208/220	....
General Electric—General Electric Co., Air Conditioning Dept., Troup Hwy., Tyler, Texas													
FD30G	62¼	34	21¼	36,000	77,300	Steam, HW	1	G-E	3	....	1—3	208/220/230	3.4
FD50G	62¼	45	23¼	60,000	120,000	Steam, HW	1	G-E	5	....	1—3	208/220/230	5.7
FD75G	85½	45	23¼	90,000	177,500	Steam, HW	1	G-E	7½	....	3	208/230	9.2
FD100G	92⅝	55	28½	120,000	242,000	Steam, HW	2	G-E	(3) 5	....	3	208/220	11.6
FDW100C	80	49¼	30½	120,000	280,000	Steam, HW	1	G-E	10	....	3	208/220	11.6
FD150G	91	77	28½	180,000	368,000	Steam, HW	2	G-E	(2) 7½	....	3	208/220	18.0
FDW150C	87⅝	52⅛	30½	180,000	352,000	Steam, HW	1	GE-	15	....	3	208/220	18.5
FDW200C	94½	77	43	360,000	610,000	Steam, HW	2	G-E	(2) 10	....	3	208/220	23.7
FDW250C	94½	77	43	300,000	715,000	Steam, HW	2	G-E	(1) 10 (1) 15	....	3	208/220	32.2
FDW300C	94½	77	43	360,000	830,000	Steam, HW	2	G-E	(2) 15	....	3	208/220	41.1
FCW30B	28½	34	54½	36,000	68,300	Steam, HW	1	G-E	3	....	1—3	208/220/230	3.4
FCW50B	28½	55	54½	60,000	121,000	Steam, HW	1	G-E	5	....	1—3	208/220/230	5.7
FCW75B	28½	85	56½	90,000	165,000	Steam, HW	1	G-E	7½	....	3	208/230	9.2
Haertel—Walter Haertel Co., 2840 Fourth Ave., S., Minneapolis, Minn.													
VU-50	61¼	37⅝	25⅝	6,500	....	....	1	Copeland	⅛	B5ZW	1	110	....
VU-75	61¼	37⅝	25⅝	10,000	....	....	1	Copeland	¼	E77WH	1	110	....
VU-1	61¼	37⅝	25⅝	13,000	....	....	1	Copeland	1	DE100WH	1	220	....
VU-2	74	46¼	28⅜	23,000	....	....	1	Copeland	2	4R6-300	3	220	....
VU-3	74	46¼	28⅜	35,000	....	....	1	Copeland	3	3R42-300	3	220	....
VU-5	79⅜	75¼	29⅝	57,500	....	....	1	Tecumseh	5	....	3	220	....
Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis, Mo.													
30	83	36	24	36,000	91,000	Steam	1	Tecumseh	3	....	3	220	....
50	84	38	28	60,000	153,000	Steam	1	Tecumseh	5	....	3	220	....
75	94	42	28	90,000	232,000	Steam	1	Copeland	7½	....	3	220	....
100	99	48	28	120,000	274,000	Steam	1	Copeland	10	....	3	220	....
150	99	78	29	180,000	395,000	Steam	2	Copeland	7½	....	3	220	....
200	108	78	32	240,000	455,000	Steam	2	Copeland	10	....	3	220	....
Lennox—Lennox Industries, Inc., 200 S. 12th Ave., Marshalltown, Iowa													
CHA4-301	22	30¾	43	23,000	None	....	1	....	2	....	1	230	3.1
CHA4-301	28	35	51⅝	36,000	None	....	1	....	3	....	1	230	4.6
CHA3-501	28	58¼	66⅛	59,000	None	....	1	....	5	....	1—3	208/220/230	8.2
CB11-301	61¼	23¾	27⅞	36,000	None	....	1	....	3	....	1—3	208/220/230	....
CB11-501	68¼	28	27⅞	62,000	None	....	1	....	5	....	1—3	208/220/230	....
LSB1-300	61¼	23¾	27⅞	36,000	None	....	1	....	3	....	1—3	208/220/230	3.9
LSB1-500	68¼	28	27⅞	59,000	None	....	1	....	5	....	1—3	208/220/230	7.8
LSBH3-300	34	27½	60	36,000	None	....	1	....	3	....	1—3	208/220/230	3.9
LSBH3-500	37	34⅝	97	59,000	145,000*	Gas	1	....	5	....	1—3	208/220/230	7.8
LSBH3-750	32	36⅝	75½	85,000	None	....	1	....	7½	....	3	208/220	9.0
LSBH3-1000	32½	61	74	114,000	None	....	1	....	10	....	3	208/220	12.2
CB21-3004	53¼-69⅝	26	28	37,000	68-140,000*	Gas-Oil-Elec.	1	....	3	....	1—2	208/220/230	3.9
CB21-5004	53¼-69⅝	34	28	59,000	103-175,000*	Gas-Oil-Elec.	1	....	5	....	1—3	208/220/230	7.8
CB21-7504	53¼-69⅝	52	28	85,000	69-260,000*	Gas-Oil-Elec.	1	....	7½	....	3	208/220	9.0
CB21-10004	53¼-69⅝	68	28	114,000	102-350,000*	Gas-Oil-Elec.	1	....	10	....	3	208/220	12.2
Living-Air—Mayflower Air-Conditioners, Inc., Duluth Ave. & E. Seventh St., St. Paul 6, Minn.													
WAC-2	61½	27	28	24,000	....	....	1	Tecumseh	2	....	1	230	2.2
WAC-3	61½	27	28	36,000	....	....	1	Tecumseh	3	....	1—3	230	3.3
WAC-5	61½	37	32	60,000	....	....	1	Tecumseh	5	....	1—3	230	5.5
AAC-2	61½	27	28	24,000	....	....	1	Tecumseh	2	....	1	230	2.6
AAC-3	61½	27	28	36,000	....	....	1	Tecumseh	3	....	1—3	230	3.7
AAC-5	61½	37	32	60,000	....	....	1	Tecumseh	5	....	1—3	230	6.5
Mathes—The Mathes Co., Div. of Glen Alden Corp., 1501 East Broadway, Fort Worth, Texas													
90 VCEB-3E	47*	50	30	90,000	....	....	1	Copeland	9	MRG750	3	208/220	8.1
120 VCEB-3E	47*	64	30	120,000	....	....	1	Copeland	12	9R81000	3	208/220	10.2
90 VCEBP-3E	75	50	30	90,000	....	....	1	Copeland	9	MRG750	3	208/220	8.1
120 VCEBP-3E	75	64	30	120,000	....	....	1	Copeland	12	9R81000	3	208/220	10.2
Melco—Melchior, Armstrong, Dessau Co., Inc., 730 Grand Ave., Ridgefield, N. J.													
MC-37	62¼	36	25⅝	36,500	78,000	Steam	1	Copeland	3	LRH-300	1—3	208/220	....
MC-37A	62¼	36	25⅝	32,500	78,000	Steam	1	Copeland	3	LRH-300	1—3	208/220	....
MC-57	81½	42	24⅝	58,000	130,000	Steam	1	Copeland	5	MRF-500	1—3	208/220	....
MC-57A	81½	42	24⅝	53,500	130,000	Steam	1	Copeland	5	MRF-500	1—3	208/220	....
MC-82	81½	42	24⅝	88,000	190,000	Steam	1	Copeland	7½	MRG-750	3	208/220	....
MC-82A	81½	42	24⅝	80,000	190,000	Steam	1	Copeland	7½	9R9-750	3	208/220	....
MCR-52A	56	44	111¼	61,700	....	....	1	Copeland	5	LRG-500	3	208/220	....
MCR-52AH	56	44	154½*	61,700	180,000	Gas/Oil	1	Copeland	5	LRG-500	3	208/220	....
MCR-82A	56	44	111⅛	83,500	....	....	1	Copeland	7½	MRG-750	3	208/220	....
MCR-82AH	56	44	154½*	82,500	260,000	Gas/Oil	1	Copeland	7½	MRG-750	3	208/220	....
MCR-100A	56	44	122¾	110,700	....	....	1	Copeland	10	9R8-1000	3	208/220	....
MCR-100AH	56	44	165½†	110,700	250,000	Gas/Oil	1	Copeland	10	9R8-1000	3	208/220	....

*163⅝ on oil-fired model. †196⅝ on oil-fired model. 12,636 lbs. on oil model. §3,013 lbs. on oil model. ¶4,136 lbs. on oil model.

Commercial

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Control	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Embassy—Embassy Steel Products, 890 Stanley Ave., Brooklyn 8, N. Y.																
EAC-30	Shell & Coil	Water	1.5	2.7	4	R-12/22	11	X Valve	1	1,200	680	¼	1	P	14⅝x25⅝	764
EAC-50	Shell & Coil	Water	1.5	4.4	4	R-12	13	X Valve	1	2,000	680	½	1	P	18½x24⅝	925
EAC-75	Shell & Coil	Water	1.5	6.7	4	R-12	16	X Valve	2	3,000	720	½	2	P	18½x25⅛	1,167
EAC-100	Shell & Coil	Water	1.5	9.0	4	R-12	26	X Valve	2	4,000	680	½	2	P	29½x22½	1,581
EAC-150	Shell & Coil	Water	1.5	13.5	4	R-12	32	X Valve	2	6,000	760	¾	3	P	1—14⅝x25¼, 2—29½x29½	3,100
EAC-200	Shell & Coil	Water	1.5	13.5	6	R-22	50	X Valve	2	8,000	1,000	1	3	P	1—14⅝x25¼, 2—29½x29½	4,200
FloatingAir—Friedrich Refrigerators, Inc., 1117 E. Commerce St., San Antonio, Texas																
C300W	Cleanable	Water	....	2.43	4	R-22	8	X Valve	1	1,150	710-960	½	1	P	20x25	680
C500W	Cleanable	Water	....	4.58	2	R-22	10	X Valve	1	1,950	550-745	½	2	P	17⅝x28	950
C750W	Cleanable	Water	....	5.55	2	R-22	12	X Valve	1	2,950	550-745	¾	2	P	17⅝x28	1,050
C300A	Finned Tube	Air	....	2.43	4	R-22	Holding	X Valve	1	1,150	710-960	½	1	P	20x25	570
C500A	Finned Tube	Air	....	4.92	2	R-22	Holding	X Valve	1	1,950	550-745	½	2	P	17⅝x28	820
C750A	Finned Tube	Air	....	5.55	2	R-22	Holding	X Valve	1	2,950	550-745	¾	2	P	17⅝x28	895
Forston & Lincoln—The Forston Co., 1400 Conti St., Houston 2, Texas																
PEC-2	Fin & Tube	Air	....	1.55	4	R-22	3½	Cap.	1	800	1,050	½	1	....	Variable	315
PEC-3	Fin & Tube	Air	....	2.25	4	R-22	5½	Cap.	1	1,200	1,050	½	1	....	Variable	480
PEC-5	Fin & Tube	Air	....	4.34	4	R-22	8½	X Valve	1	2,000	1,075	½	1	....	Variable	950
Frick—Frick Co., Waynesboro, Pa.																
300	Shell & Coil	Water	3*	3.3	4	R-12	8	X Valve	1	1,300	775	¼	1	P	15x29	915
530	Double Tube	Water	3*	5.06	4	R-22	8	X Valve	1	2,000	782	½	1	P	22x33½	1,040
750	Double Tube	Water	3*	7.18	4	R-22	11	X Valve	1	3,000	822	¾	2	P	22x23½	1,290
1000	Double Tube	Water	3*	9.8	4	R-22	16	X Valve	2	4,000	782	1	2	P	22x30⅝	1,636
1500	Double Tube	Water	3*	14.5	4	R-22	22	X Valve	2	6,000	832	1½	3	P	26¼x34½	2,343
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																
AZE-360	Fin & Tube	Air	....	2.14	4	R-22	1.7 (ea.)	Cap.	1	1,200	1,075	¼	1	P§	28½x14⅝	375
AZE-300	Shell & Coil	Water**	1.6	3.98	3	R-12	5	X Valve	1	1,200	800	½	1	P§	20x25	637
AZE-500	Shell & Coil	Water**	1.6	4.73	4	R-12	10	X Valve	1	2,000	900	½	2	P§	16x20	907
AZE-750	Shell & Coil	Water**	1.5	6.67	4	R-12	13	X Valve	2	2,700‡	1,000	¾	2	P§	16x20, 25x20	926
AZE-1000	Shell & Coil	Water**	1.6	(2) 4.7	(2) 4	R-12	(2) 10	X Valve	2	4,000	760	1½	3	P§	20x25	1,630
AZE-1500	Shell & Coil	Water**	1.6	(2) 6.1	(2) 4	R-12	(2) 12	X Valve	2	6,000	700	2	3	P§	20x25	1,845
Gaffers & Sattler—Utility Appliance Corp., 4851 S. Alameda St., Los Angeles, Calif.																
3TP-1, -3	Fin & Tube	Air	....	2.67	4	R-22	6	Cap.	2	1,400	1,100	½	1	D	18x30	500
Genatron—General Air Conditioning Corp., 4542 E. Dunham, Los Angeles 23, Calif.																
RO 31 HP	....	Air	....	3.04	4	R-22	6.2	Cap.	1	1,400	1,080	½	1	P	16x30	475
RO 525 A	....	Air	....	8.69	4	R-22	12.5	Cap.	1	2,400	650	¾	2	P	20x20	900
General Electric—General Electric Co., Air Conditioning Dept., Troup Hwy., Tyler, Texas																
FD30G	Shell-Coil	Water	1.6	3.0	3	R-12	6½	....	1	1,200	Variable	¼	2	D	16x20	553
FD50G	Shell-Coil	Water	1.6	4.97	3	R-12	9	....	2	2,000	Variable	½	2	D	20x25	695
FD75G	Shell-Coil	Water	1.65	6.25	4	R-22	9	....	2	3,000	Variable	1	2	D	16x20, 16x25	740
FD100G	Shell-Coil	Water	1.6	10.3	3	R-12	18	....	2	4,000	Variable	2	4	D	25x16	1,300
FDW100C	Shell-Coil	Water	1.65	9.9	3	R-22	16	....	1	4,000	Variable	1	4	D	25x16	1,360
FD150G	Shell-Coil	Water	1.65	15.4	3	R-22	19	....	3	6,000	Variable	3	6	D	16x25	1,550
FDW150C	Shell-Coil	Water	1.55	14.9	3	R-22	17	....	2	6,000	Variable	2	6	D	16x20	1,600
FDW200C	Shell-Coil	Water	1.6	19.8	3	R-22	(2) 16	....	2	8,000	Variable	2	8	D	16x25	2,485
FDW250C	Shell-Coil	Water	1.55	24.6	3	R-22	16, 17	....	2	10,000	Variable	5	12	D	4—16x25, 8—16x20	2,540
FDW300C	Shell-Coil	Water	1.6	29.8	3	R-22	(2) 17	....	2	12,000	Variable	7½	16	D	16x20	2,615
FCW30B	Shell-Coil	Water	1.6	3.2	3	R-12	12	....	1	1,200	Variable	¼	2	D	16x20	535
FCW50B	Shell-Coil	Water	1.6	5.3	3	R-12	11	....	1	2,000	Variable	½	2	D	20x25	695
FCW75B	Shell-Coil	Water	1.6	6.6	4	R-22	10	....	1	3,000	Variable	¾	3	D	2—16x25, 1—30x25	705
Haertel—Walter Haertel Co., 2840 Fourth Ave., S., Minneapolis, Minn.																
VU-50	Shell & Coil	Water	3	1.18	2	R-12	5	X Valve	1	230	575	¼	2	D	10x20	730
VU-75	Shell & Coil	Water	3	1.18	4	R-12	6	X Valve	1	500	562	¼	2	D	10x20	730
VU-1	Shell & Coil	Water	3	1.18	4	R-12	6	X Valve	1	700	980	¼	2	D	10x20	730
VU-2	Shell & Coil	Water	3	3.93	4	R-12	16	X Valve	1	1,300	750	½	2	D	10x20	1,400
VU-3	Shell & Coil	Water	3	4.50	4	R-12	24	X Valve	1	1,900	900	½	2	D	10x20	1,400
VU-5	Shell & Coil	Water	3	7.50	4	R-13	40	X Valve	2	3,300	650	½	3	D	16x25x3	2,250
Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis, Mo.																
30	Shell & Coil	Water	....	2.4	4	R-22	7	....	1	1,200	950	¼	1	D	20x20	....
50	Shell & Coil	Water	....	4	4	R-22	10	....	1	2,000	700	½	2	D	16x20	....
75	Shell & Coil	Water	....	6	4	R-22	13	....	2	3,000	500	¾	2	D	18x25	....
100	Shell & Coil	Water	....	8	4	R-22	15	....	2	4,000	725	1	3	D	16x25	....
150	Shell & Coil	Water	....	12	4	R-22	26	....	3	6,000	790	1½	5	D	18x26	....
200	Shell & Coil	Water	....	16	4	R-22	30	....	3	8,000	650	2	6	D	18x25	....
Lennox—Lennox Industries, Inc., 200 S. 12th Ave., Marshalltown, Iowa																
CHA4-201	....	Air	....	1.87	4	R-22	....	....	1	800	....	¼	....	Opt.	....	450
CHA4-301	....	Air	....	2.69	4	R-22	....	....	1	1,200	718-909	¼	....	Opt.	....	650
CHA3-501	....	Air	....	4.7	4	R-22	....	....	1	2,000	543-740	½	....	Opt.	....	1,035
CB11-301	....	Water	1.56	2.94	3	R-22	....	....	1	1,200	543-740	¼	....	Opt.	....	490
CB11-501	....	Water	1.63	4.4	4	R-22	....	....	1	2,000	625-865	½	....	Opt.	....	690
LSB1-300	....	Air	....	2.94	3	R-22	Holding	....	1	1,200	675-845	¼	....	Opt.	....	382
LSB1-500	....	Air	....	4.4	4	R-22	Holding	....	1	2,000	625-865	½	....	Opt.	....	440
LSBH3-300	....	Air	....	2.94	4	R-22	Holding	....	1	1,200	685-910	¼	1	D	13x30	354
LSBH3-500	....	Air	....	4.69	4	R-22	Holding	....	1	2,000	690-925	½	1	D	30x36	471
LSBH3-750	....	Air	....	6.45	4	R-22	Holding	....	1	3,000	479-715	¾	2	D	20x44	608
LSBH3-1000	....	Air	....	9.38	4	R-22	Holding	....	2	4,000	436-667	1	2	D	30x34	921
CB21-3004	....	Air	....	3.13	4	R-22	Holding	....	1	1,200	— Selected —	....	1	D	40x24	396-515
CB21-5004	....	Air	....	4.37	4	R-22	Holding	....	1	2,000	— Selected —	....	1	D	40x32	551-360
CB21-7504	....	Air	....	6.88	4	R-22	Holding	....	2	3,000	— Selected —	....	2	D	40x24	613-647
CB21-10004	....	Air	....	9.36	4	R-22	Holding	....	2	4,000	— Selected —	....	2	D	40x32	729-765
Living-Air—Mayflower Air-Conditioners, Inc., Duluth Ave. & E. Seventh St., St. Paul 6, Minn.																
WAC-2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
WAC-3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
WAC-5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
AAC-2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
AAC-3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
AAC-5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mathes—The Mathes Co., Div. of Glen Alden Corp., 1501 East Broadway, Fort Worth, Texas																
90 VCEB-3E	Fin & Tube	Air	....	8.2	3	R-22	....	Cap.	1	2,275	605	¾	3	D	18x35	725
120 VCEB-3E	Fin & Tube	Air	....	10.9	3	R-22	....	Cap.	1	4,500	700	1	3	D	20x25	880
90 VCEBP-3E	Fin & Tube	Air	....	8.2	3	R-22	....	Cap.	1	2,275	605	1	3	D	18x35	880
120 VCEBP-3E	Fin & Tube	Air	....	10.9	3	R-22	....	Cap.	1	4,500	700	1½	3	D	20x25	975
Melco—Melchior, Armstrong, Dessau Co., Inc., 730 Grand Ave., Ridgefield, N. J.																
MC-37	Tube-in-Tube	Water	1½	2.93	4	R-12	5½	X Valve	1	1,200	....	½	2	D	16x20	700
MC-37A	Fin Tube	Air	....	2.93	4	R-12	5½	X Valve	1	1,200	....	½	2	D	16x20	670
MC-57	Tube-in-Tube	Water	1½	4.43	4	R-12	8	X Valve	1	2,000	....	½	2	D	20x25	970
MC-57A	Fin Tube	Air	....	4.43	4	R-12	8	X Valve	1	2,000	....	½	2	D	20x25	910
MC-82	Tube-in-Tube	Water	1½	6.02	4	R-22	8½	X Valve	1	3,000	....	¾	2	D	20x25	1,050
MC-82A	Fin Tube	Air	....	6.02	4	R-12	12	X Valve	1	3,000	....	¾	2	D	20x25	1,010
MCR-52A	Fin Tube	Air	....	4.42	4	R-22	17	X Valve	1	2,000	....	....	4	D	16x20	1,040
MCR-52AH	Fin Tube	Air	....	4.42	4	R-22	17	X Valve	1	2,000	....	....	4	D	16x20	3,136‡
MCR-82A	Fin Tube	Air	....	6.02	4	R-22	22	X Valve	1	3,000	....	....	4	D	16x30	1,717
MCR-82AH	Fin Tube	Air	....	6.02	4	R-22	22	X Valve	1	3,000	....	....	4	D	16x20	3,

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.													
MSA-200	78½	31¼	24	22,800	...	...	1	Tecumseh	2	...	1–3	230	...
MSA-300	78½	31½	24	33,600	...	...	1	Tecumseh	3	...	1–3	230	...
MSA-500	78½	44⅝	24	58,800	...	...	1	Tecumseh	5	...	1–3	230	...
MS-200	78½	31½	24	27,600	...	...	1	Tecumseh	2	...	1–3	230	...
MS-300	78½	31½	24	38,400	...	...	1	Tecumseh	3	...	1–3	230	...
MS-500	78½	44⅝	24	63,600	...	...	1	Tecumseh	5	...	1–3	230	...
MWC-200	70	29	23	27,600	...	...	1	Tecumseh	2	...	1–3	230	...
MWC-300	70	29	23	38,400	...	...	1	Tecumseh	3	...	1–3	230	...
MWC-500	84	40	25	63,600	...	...	1	Tecumseh	5	...	1–3	230	...
Oil-O-Matic—Williams Oil-O-Matic, 851 W. Third Ave., Columbus, Ohio													
CUC	77	26	21¼	36,000	...	...	1	Copeland	3	95-600, LRH-300	1–3	230-208/220	...
CUD	85⅝	43½	28	60,000	...	...	1	Copeland	5	MF-500, MRF 500	1–3	230-208/220	...
CUE	87⅝	59½	28½	90,000	...	...	1	Copeland	7½	9R9-750	3	220	...
CUF	87⅝	72	28½	120,000	...	...	2	Copeland	10	MRF 500	3	220	...
CUG	98⅝	86	29¼	180,000	...	...	2	Copeland	15	9R9-750	3	220	...
Perfection—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio													
PH46SC	73½	37	24½	37,000	...	...	1	Tecumseh	3	JE-300	1–3	230/208/220	3.7
PH66SC	73½	37	24½	60,600	...	...	1	Copeland	5	LRG-500	1–3	230/208/220	5.74
PH96SC	73½	37	24½	97,500	...	...	1	Copeland	8	MRG-750	3	208/220	7.65
PH117SC	83	53	33	135,000	...	...	1	Copeland	10	9RS-1000	3	208/220	9.71
PH167SC	89	53	33	182,000	...	...	1	Brunner	15	150HF	3	208/220	14.9
PH216SC	95	62	35	248,000	...	...	2	Copeland	10	9RS-1000	3	208/220	19.4
PH286SC	95	62	35	330,000	...	...	3	Copeland	7½	MRG-750	3	208/220	22.65
Typhoon—Typhoon Air Conditioning Co., Div. of Hupp Corp., 505 Carroll St., Brooklyn 15, N. Y.													
H-46-SC	87½	37	24½	37,000	91,200	Steam or HW	1	Tecumseh	3	JE300	3	208/220	3.2
H-66-SC	87½	37	24½	60,600	140,000	Steam or HW	1	Copeland	5	LRG-520	3	208/220	5.19
H-86-SC	87½	37	24½	97,500	194,000	Steam or HW	1	Copeland	7½	MRG-750	3	208/220	6.53
H-76-SC	95⅝	53	27	94,800	194,000	Steam or HW	2	Tecumseh	3	JE300	3	208/220	6.4
H-117-SC	98⅝	62	33	125,000	297,000	Steam or HW	1	Copeland	10	9RS-1000	3	208/220	8.64
H-167-SC	102⅝	62	33	182,000	364,000	Steam or HW	1	Brunner	15	150HF	3	208/220	12.4
H-216-SC	117	62	35	248,000	556,000	Steam or HW	2	Copeland	10	9RS-1000	3	208/220	17.28
H-286-SC	119	62	35	330,000	556,000	Steam or HW	3	Copeland	7½	MRG-750	3	208/220	19.56
H-317-SC	92*	84	45	364,000	960,000	Steam or HW	2	Brunner	15	150HF	3	208/220	26.8
H-416-SC	92*	84	45	492,000	960,000	Steam or HW	4	Copeland	10	9RS-1000	3	208/220	34.56
H-467-SC	108*	120	45	568,000	1,280,000	Steam or HW	3	Brunner	15	150HF	3	208/220	40.2
H-516-SC	108*	120	45	610,000	1,580,000	Steam or HW	5	Copeland	10	9RS-1000	3	208/220	43.20
H-617-SC	108*	120	45	728,000	1,550,000	Steam or HW	6	Copeland	10	9RS-1000	3	208/220	51.84
H-60-CMU	32	44	57	60,600	140,000	Steam or HW	1	Copeland	5	LRG-520	3	208/220	5.19
H-80-CMU	32	44	57	97,500	194,000	Steam or HW	1	Copeland	7½	MRG-750	3	208/220	6.35
H-60-RMU	40	92	55	62,500	140,000	Gas	1	Copeland	5	LRG-520	3	208/220	5.19
H-80-RMU	40	92	55	85,600	140,000	Gas	1	Copeland	7½	MRG-750	3	208/220	6.35

*No plenum available. †3 with tower, 1.5 on city water.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers E.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.																
MSA-200	Air	...	...	3.06	3	R-22	...	...	1	800	...	¼	1	D	20x22x1	...
MSA-300	Air	...	...	3.06	4	R-22	...	...	1	1,200	...	½	1	D	20x22x1	...
MSA-500	Air	...	...	4.82	4	R-22	...	...	2	2,000	...	½	2	D	22x16½x1	...
MS-200	Cleanable	Water	...	3.06	2	R-22	4# 12	...	1	800	...	¼	1	D	20x22x1	...
MS-300	Cleanable	Water	...	3.06	4	R-22	5# 12	...	1	1,200	...	½	1	D	20x22x1	...
MS-500	Cleanable	Water	...	4.82	4	R-22	12	...	2	2,000	...	½	2	D	22x16½x1	...
MWC-200	Tube-in-Tube	Water	...	3.06	3	R-22	4# 12	...	1	800	...	¼	1	D	20x22x1	...
MWC-300	Tube-in-Tube	Water	...	3.06	4	R-22	5# 12	...	1	1,200	...	½	1	D	20x22x1	...
MWC-500	Tube-in-Tube	Water	...	4.82	4	R-22	12	...	2	2,000	...	½	2	D	22x16½x1	...
Oil-O-Matic—Williams Oil-O-Matic, 851 W. Third Ave., Columbus, Ohio																
CUC	Shell & Coil	Water	4	2.9	3	R-22	4	X Valve	1	1,200	...	½	1	F	19x38⅞	902
CUD	Shell & Coil	Water	4	4.7	3	R-22	9	X Valve	1	2,000	...	½	2	F	22x17	1,052
CUE	Shell & Coil	Water	4	6.55	4	R-22	12	X Valve	1	3,000	...	¾	2	F	26½x30½	1,438
CUF	Shell & Coil	Water	4	8.55	4	R-22	24	X Valve	2	4,000	...	1½	3	F	26½x26½	2,125
CUG	Shell & Coil	Water	4	12.1	4	R-22	24	X Valve	2	6,000	...	2	3	F	26½x24⅝	2,642
Perfection—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																
PH46SC	Tube-in-Tube	Water	1½	2.81	4	R-22	6½	X Valve	1	1,200	...	½	2	D	16x25, 20x25	615
PH66SC	Tube-in-Tube	Water	1½	4.67	4	R-22	9	X Valve	1	2,000	...	½	2	D	16x25, 20x25	790
PH96SC	Tube-in-Tube	Water	1½	4.67	6	R-22	11	X Valve	1	2,800	...	¾	3	D	16x25, 20x25	915
PH117SC	Tube-in-Tube	Water	1½	9.62	4	R-22	16	X Valve	2	4,000	...	1	4	F	16x25	1,315
PH167SC	Tube-in-Tube	Water	1½	9.62	6	R-22	19.5	X Valve	2	5,600	...	1½	4	F	16x25	1,345
PH216SC	Tube-in-Tube	Water	1½	12.0	6	R-22	32	X Valve	2	8,000	...	2	6	F	16x20	2,400
PH286SC	Tube-in-Tube	Water	1½	18.0	6	R-22	32	X Valve	2	8,000	...	3	6	F	16x20	2,500
Typhoon—Typhoon Air Conditioning Co., Div. of Hupp Corp., 505 Carroll St., Brooklyn 15, N. Y.																
H-46-SC	Tube-in-Tube	Water	3/1.5†	2.81	4	R-22	6.5	X Valve	1	1,200	Variable	½	2	D	16x25, 20x25	615
H-66-SC	Tube-in-Tube	Water	3/1.5†	4.67	4	R-22	9	X Valve	1	2,000	Variable	½	2	D	16x25, 20x25	790
H-86-SC	Tube-in-Tube	Water	3/1.5†	4.67	6	R-22	11	X Valve	1	2,800	Variable	¾	2	D	16x25, 20x25	915
H-76-SC	Tube-in-Tube	Water	3/1.5†	7.87	...	R-22	13	X Valve	2	2,800	Variable	¾	3	D	20x25	1,540
H-117-SC	Tube-in-Tube	Water	3/1.5†	9.62	4	R-22	16	X Valve	2	4,000	Variable	1	4	D	16x25	1,315
H-167-SC	Tube-in-Tube	Water	3/1.5†	9.62	6	R-22	19.5	X Valve	2	5,600	Variable	1½	4	D	16x25	1,345
H-216-SC	Tube-in-Tube	Water	3/1.5†	13.0	6	R-22	32	X Valve	2	8,000	Variable	2	6	P	16x20	2,400
H-286-SC	Tube-in-Tube	Water	3/1.5†	13.0	8	R-22	32	X Valve	2	8,000	Variable	3	6	P	16x20	3,200
H-317-SC	Tube-in-Tube	Water	3/1.5†	21.0	6	R-22	39	X Valve	3	12,000	Variable	5	8	P	20x25	3,020
H-416-SC	Tube-in-Tube	Water	3/1.5†	21.0	8	R-22	64	X Valve	3	12,000	Variable	5	8	P	20x25	4,560
H-467-SC	Tube-in-Tube	Water	3/1.5†	32.4	5	R-22	50½	X Valve	3	20,000	Variable	10	21	P	20x16	4,740
H-516-SC	Tube-in-Tube	Water	3/1.5†	32.4	6	R-22	80	X Valve	3	20,000	Variable	10	21	P	20x16	5,700
H-617-SC	Tube-in-Tube	Water	3/1.5†	38.8	6	R-22	117	X Valve	3	24,000	Variable	10	21	P	20x16	5,950
H-60-CMU	Tube-in-Tube	Water	3/1.5†	4.83	4	R-22	9	X Valve	1	2,000	Variable	½	2	D	20x20	945
H-80-CMU	Tube-in-Tube	Water	3/1.5†	4.83	6	R-22	13	X Valve	1	3,000	Variable	1	2	D	20x20	970
H-60-RMU	Finned Tube	Air	...	4.85	4	R-22	...	...	1	2,000	Variable	½	2	D	20x25	2,000
H-80-RMU	Finned Tube	Air	...	4.85	6	R-22	...	...	1	3,000	Variable	1	2	D	20x25	2,300

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
UsAirco—United States Air Conditioning Corp., P. O. Box 360, Delaware, Ohio													
7730G	77⅛	31½	22¼	36,300	113,000	Steam	1	Tecumseh	3	JE-300	1–3	230/208/220/440	...
7750G	84⅛	39⅛	24½	60,500	172,000	Steam	1	Tecumseh	5	FB-500	1-2-3	230/208/220/440	...
7775G	89⅛	42⅛	26½	91,300	270,000	Steam	1	Copeland	7½	MR50-750	2–3	208/220/440	...
77100G	93⅝	54½	26½	121,000	382,000	Steam	1	Copeland	10	9R9-1000	3–3	208/220/440	...
77150G	103½	73	31½	182,000	576,000	Steam	2	Copeland	7½	MR50-750	2–3	208/220/440	...
77200G	106⅛	73	36½	242,000	697,000	Steam	2	Copeland	10	9R9-1000	3–3	208/220/440	...

‡1—20x25, 1—16x25, 3—16x20, 2—20x20.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers E.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
UsAirco—United States Air Conditioning Corp., P. O. Box 360, Delaware, Ohio																
7730G	Shell & Coil	Water	3	2.61	4	R-22	9	X Valve	1	1,200	805	¼	1	P	16x25	530
7750G	Shell & Coil	Water	3	4	4	R-22	13	X Valve	1	2,000	730	½	2	P	16x20	730
7775G	Shell & Coil	Water	3	6	4	R-22	17	X Valve	2	3,000	975	¾	2	P	16x25, 20x25	940
77100G	Shell & Coil	Water	3	8	4	R-22	19	X Valve	2	4,000	820	1½	3	P	16x25	1,230
77150G	Shell & Coil	Water	3	12	4	R-22	34	X Valve	3	6,000	805	2	6	P	←16x20, 3—16x25	2,050
77200G	Shell & Coil	Water	3	16	4	R-22	39	X Valve	2	8,000	850	3	6	P	‡	2,370

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.													
COM2	76	31	20	24,000	...	...	1	Tecumseh	2	...	1–3	208/220/230/440	....
COM3	76	31	20	36,000	...	...	1	Tecumseh	3	...	1–3	208/220/230/440	....
COM5	76	39½	26	61,800	...	...	1	Copeland	5	...	1–3–3	208/220/230/440	....
COM7½	76	39½	26	94,400	...	...	1	Copeland	7½	...	3–3	208/220/230/440	....
COM10-1	102	39½	26	120,200	...	...	2	Copeland	10	...	3–3	208/220/230/440	....
COM10-2	84	64	32	123,600	...	...	3	Tecumseh	5	...	3–2	208/220/230/440	....
COM15	84	64	32	188,800	...	...	3	Copeland	7½	...	3–2	208/220/230/440	....
COM20	84	72	32	243,000	...	...	3	Copeland	10	...	3–3	208/220/230/440	....
COM30	90*	96	44	361,200	...	...	3	Brunner	15	...	3–3	208/220/230/440	....
COM45		——— (To Specifications) ———					3	Brunner	15	...	3	208/220/230/440	....
COM60		——— (To Specifications) ———					4	Brunner	15	...	3	208/220/230/440	....

†Without plenum.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers E.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.																
COM2	Co-Axial	Water	1½	2.75	4	R-22	...	Cap.	1	800	...	¼	...	D	20x25	500
COM3	Co-Axial	Water	1½	2.75	4	R-22	...	Cap.	1	1,200	...	½	...	D	20x25	555
COM5	Co-Axial	Water	1½	4.13	4	R-22	...	Cap.	1	2,000	...	½	...	D	16x25	400
COM7½	Co-Axial	Water	1½	5.5	4	R-22	...	Cap.	1	3,000	...	¾	...	D	16x25	1,300
COM10-1	Co-Axial	Water	1½	8.26	4	R-22	...	Cap.	1	4,000	...	1	...	D	16x20	1,300
COM10-2	Co-Axial	Water	1½	8.26	4	R-22	...	Cap.	2	4,000	...	1	...	D	16x20	1,800
COM15	Co-Axial	Water	1½	11.0	4	R-22	...	Cap.	2	6,000	...	1½	...	D	16x20	2,300
COM20	Co-Axial	Water	1½	15.4	4	R-22	...	Cap.	2	8,000	...	2	...	D	16x20	2,600
COM30	Co-Axial	Water	1½	23.3	4	R-22	...	Cap.	2	12,000	...	5	...	D	16x20	3,400
COM45	Co-Axial	Water	1½	(To Specs.)		R-22	...	Cap.	3		——— (To Specifications) ———					
COM60	Co-Axial	Water	1½	(To Specs.)		R-22	...	Cap.	4		——— (To Specifications) ———					

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
Westinghouse Unitaire—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.													
SU-402	75½	24⅝	25	36,000	...	Steam, HW	1	Westinghouse	...	CLS-51	1–3*	230/208/220/440†	....
SU-602A	83½	41⅝	27	60,000	...	Steam, HW	1	Westinghouse	...	CLS-51	1–3*	230/208/220/440†	....
SU-802A	91	53⅛	28½	89,000	...	Steam, HW	1	Westinghouse	...	CLS-51	3*	230/208/220/440†	....
MU-113	90⅝	62⅝	33⅛	120,000	...	Steam, HW	2	Westinghouse	...	CLS-51	3*	230/208/220/440†	....
MU-163	90⅝	71⅝	32½	160,000	...	Steam, HW	3	Westinghouse	...	CLS-51	3*	230/208/220/440†	....
MU-213	97½	85	34⅝	207,700	...	Steam, HW	3	Westinghouse	...	CLS-51	3*	230/208/220/440†	....
MU-263	99⅝	96	34⅝	297,600	...	Steam, HW	3	Westinghouse	...	CLS-51	3*	230/208/220/440†	....
MU-313	99⅝	96	34⅝	361,000	...	Steam, HW	4	Westinghouse	...	CLS-51	3*	230/208/220/440†	....

*Also made specifically for 50-cycle operation. †Also available for 550 volts.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers E.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Westinghouse Unitaire—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.																
SU-402	Tube-in-Tube	Water	...	2.9	2	R-22	...	X Valve	1	1,200	...	...	1	P	20x25	540
SU-602A	Shell & Coil	Water	...	4.0	3	R-22	...	X Valve	1	2,000	...	...	2	P	16x30	750
SU-802A	Shell & Tube	Water	...	6.0	3	R-22	...	X Valve	1	3,000	...	...	4	P	12x20, 12x25	900
MU-113	Shell & Tube	Water	...	8.9	4	R-22	...	X Valve	3	4,000	...	...	2	P	20x30, 25x30	1,510
MU-163	Shell & Tube	Water	...	12.1	4	R-22	...	X Valve	2	6,000	...	...	3	P	20x30	1,730
MU-213	Shell & Tube	Water	...	16	4	R-22	...	X Valve	2	8,000	...	...	4	P	20x30	2,460
MU-263	Shell & Tube	Water	...	20	4	R-22	...	X Valve	2	1,000	...	...	5	P	...	2,600
MU-313	Shell & Tube	Water	...	20	4	R-22	...	X Valve	2	1,200	...	...	6	P	...	3,135

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
Worthington—Worthington Corp., Ampere Station, East Orange, N. J.													
SCY-40	82⅝	37⅛	21¼	37,000*	105,600	Steam, HW	1	Worthington	3	2JF2-3	1–3–3†	208/220/230/440‡	4.38
SCY-60	86	48⅛	21½	57,000*	155,200	Steam, HW	1	Worthington	5	2JF3	1–3–3†	208/220/230/440‡	7.07
SCY-80	85½	58⅛	23⅝	80,000*	200,500	Steam, HW	1	Worthington	7½	2JF5	2–3†	208/220/440‡	10.95
SCY-1100	85½	58⅛	23⅝	113,000	300,500	Steam, HW	1	Worthington	10	2JF5-10	3	208/220/440‡	10.56
SCY-1550	98⅝	82⅛	31⅛	160,000	365,000	Steam, HW	2	Worthington	(2) 7½	2JF5	2–3	208/220/440‡	17.34
SCY-2050	73⅛	78	38	240,000	589,000	Steam, HW	2	Worthington	(2) 10	2JF5-10	3	208/220/440/550	19.49
SCY-2550	73½	78	38	300,000	668,000	Steam, HW	2	Worthington	(3) 7½	2JF5	3	208/220/440/550	31.9
SCY-3050	79	90	41	360,000	980,000	Steam, HW	3	Worthington	(3) 10	2JF5-10	3	208/220/440/550	33.7
SAC-40	82⅝	37⅛	21½	32,000*	105,600	Steam, HW	...	Worthington	3	2JF2-3	1–3–3†	208/220/230/440‡	4.90
SAC-60	86	48⅛	21½	50,000*	155,200	Steam, HW	1	Worthington	5	2JF3	1–3–3†	208/220/230/440‡	8.05
SAC-80	85½	58⅛	23⅝	81,000*	200,500	Steam, HW	1	Worthington	7½	2JF5	2–3	208/220/440‡	12.01
SAC-1100	98½	58⅛	23⅝	101,000	200,500	Steam, HW	1	Worthington	10	2JF5	3	208/220/440‡	13.22
SAC-1550	98⅝	82½	31⅛	173,000	365,000	Steam, HW	2	Worthington	(2) 7½	2JF5	2–3	208/220/440‡	22.12
SAC-2050	73½	78	38	222,000	589,000	Steam, HW	3	Worthington	(2) 10	2JF5	3	208/220/440‡	23.18
SAC-2550	73½	78	38	282,000	668,000	Steam, HW	3	Worthington	(3) 7½	2JF5	3	208/220/440/550	35.3
SAC-3050	79	90	41	336,000	980,000	Steam, HW	3	Worthington	(3) 10	2JF5-10	3	208/220/440/550	37.0

*ARI ratings. †50-cycle unit available on request. ‡Also available for 380, 550 volts.

Model No.	Condenser Type	Condenser Cooling Medium	Water Usage G.p.m./Ton	Evaporator Face Area (Sq. Ft.)	Evaporator Rows Deep	Refrigerant No.	Refrigerant Charge (Lbs.)	Refrigerant Control	Blowers No.	Blowers C.f.m.	Blowers E.p.m.	Blowers Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight (Lbs.)
Worthington—Worthington Corp., Ampere Station, East Orange, N. J.																
SCY-40	Shell & Coil	Water	1.5	3.84	3	R-22	9	...	1	1,200	...	½	2	D	16x20	794
SCY-60	Shell & Coil	Water	1.36	5.22	3	R-22	12	...	1	1,800	...	½	2	D	20x20	938
SCY-80	Shell & Coil	Water	1.35	8.38	3	R-22	14	...	2	3,000	...	¾	3	D	16x25	1,280
SCY-1100	Shell & Coil	Water	1.5	9.2	4	R-22	35	...	2	3,680	...	2	3	D	16x25	1,500
SCY-1550	Shell & Coil	Water	1.24	13	4	R-22	26	...	2	6,000	...	2	8	D	4—16x30, 4—30x20	2,780
SCY-2050	Shell & Coil	Water	1.5	21.9	4	R-22	...	...	2	8,000	...	3	9	P	16x25	2,900
SCY-2550	Shell & Coil	Water	1.5	21.9	4	R-22	...	...	2	10,000	...	5	9	P	17x25	3,400
SCY-3050	Shell & Coil	Water	1.5	27.3	5	R-22	...	...	3	12,000	...	5	10	P	8—16x25, 2—30x25	3,800
SAC-40	Fin-Tube	Air	...	3.84	3	R-22	17	...	1	1,200	...	½	2	D	16x20	1,180
SAC-60	Fin-Tube	Air	...	5.22	3	R-22	24	...	1	1,800	...	½	2	D	20x20	1,370
SAC-80	Fin-Tube	Air	...	8.38	3	R-22	30	...	2	3,000	...	¾	3	D	16x25	1,745
SAC-1100	Fin-Tube	Air	...	9.2	4	R-22	42	...	2	3,680	...	2	3	D	16x25	2,250
SAC-1550	Fin-Tube	Air	...	13	4	R-22	60	...	2	6,000	...	2	8	D	4—17x30, 4—30x20	3,175
SAC-2050	Fin-Tube	Air	...	21.9	4	R-22	...	...	2	8,000	...	3	9	P	16x25	3,500
SAC-2550	Fin-Tube	Air	...	21.9	4	R-22	...	...	2	10,000	...	5	9	P	16x25	4,000
SAC-3050	Fin-Tube	Air	...	27.3	5	R-22	...	...	3	12,000	...	5	10	P	8—16x25, 2—30x25	4,400

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor No.	Make	Hp.	Mfr. No.	Motor Phase	Volts	Kw. Input
York Embassy—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York, Pa.													
354	82½	35	23	39,600	91,500*	Steam	1	York	3	...	1–3–3	230/220/208/440/550	....
554	82½	42	23	66,400	137,600*	Steam	1	York	5	...	1–3–3	230/220/208/440/550	....
752	93½	46	27	98,600	195,500*	Steam	1	York	7½	...	2–3	220/208/440/550	....
1003	96⅝	71	36	130,800	251,500*	Steam	2	York	(2) 5	...	2–3	220/208/440/550	....

Room Air Conditioners—Self Contained

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Type	Application‡	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Refrigerant No. (12, 22)	Charge (Oz.)
Admiral—Admiral Corp., 3800 Cortland, Chicago 47, Ill.																	
A107S7	13¼	26¼	12	Flush	Steel & P.	No	LF	Knobs	W	6,600	1.8	...	200	...	...	R-22	13
A107L7	13¼	26¼	12	Flush	Steel & P.	No	LF	K & PB	W	6,600	1.8	...	200	...	...	R-22	13
A108L12	13¼	26¼	12	Flush	Steel & P.	No	LF	K & PB	W	8,200	2.5	...	230	...	...	R-22	16
A108S23	13¼	26¼	12	Flush	Steel & P.	No	LF	Knobs	W	7,600	2.5	...	235	...	...	R-22	13
A108L23	13¼	26¼	12	Flush	Steel & P.	No	LF	K & PB	W	8,400	2.5	...	230	...	...	R-22	16
A108HL12	13¼	26¼	12	Flush	Steel & P.	No	LF	K & PB	W	8,200	2.5	7,500	230	...	...	R-22	16
A108HL23	13¼	26¼	12	Flush	Steel & P.	No	LF	K & PB	W	8,400	2.5	7,700	230	...	...	R-22	16
100S7	14	26¼	17	3⅝	Steel & P.	No	LF	Knobs	W	6,800	1.6	...	250	...	...	R-22	18
100L7	14	26¼	17	3⅝	Steel & P.	No	LF	K & PB	W	6,800	1.6	...	250	...	40	R-22	18
100L12	14	26¼	17	3⅝	Steel & P.	No	LF	K & PB	W	8,200	2.0	...	270	...	45	R-22	19
100S23	14	26¼	17	3⅝	Steel & P.	No	LF	Knobs	W	8,200	2.0	...	270	...	...	R-22	19
100L23	14	26¼	17	3⅝	Steel & P.	No	LF	K & PB	W	8,200	2.0	...	270	...	45	R-22	19
150S12	20	26¼	16⅝	2¼	Steel & P.	No	LF	Knobs	W	10,500	2.3	...	310	...	...	R-22	23
150L12	20	26¼	16⅝	2¼	Steel & P.	No	LF	K & PB	W	10,500	2.3	...	310	...	75	R-22	23
150L23A	20	26¼	20⅝	3¼	Steel & P.	No	LF	K & PB	W	13,500	3.1	...	400	...	80	R-22	25
200S23A	20	26¼	20⅝	3¼	Steel & P.	No	LF	Knobs	W	15,500	3.5	...	410	...	...	R-22	29
200L23A	20	26¼	20⅝	3¼	Steel & P.	No	LF	K & PB	W	16,000	3.5	...	430	...	90	R-22	29
‡F—front, L—left. ¶W—normal window.																	
AIRditioner—Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.																	
SCA	22½	38	7	7	Steel	...	T L & R	Knob	T Con	8,700	...	15,800†	310	...	60	R-22	...
†T—top, R—right, L—left, ‡—thru-wall, Con—console, †2 p.s.i. steam.																	
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																	
1600-8	15⅝	26½	31¼	4††	Steel	No	F	Knob	W	12,000*	5.2	...	340	...	...	R-22	26.4
1615-5	15⅝	26½	31¼	4††	Steel	No	F	Knob	W	13,800*	5.9	...	340	65	100	R-22	26.4
1620-4-5†	15⅝	26½	31¼	4††	Steel	No	F	Knob	W	16,000*	7.6	...	415	80	125	R-22	30.4
1635	20⅞	26½	35	3††	Steel	...	F	Knob	W	22,000*	10.0	...	550	110	150	R-22	48.0
1600-16	16⅝	27	17⅞	2††	Steel	...	LF	Knob	W T	9,000*	4.1	...	325	45	...	R-22	20.0
1600-17	16⅝	27	17⅞	2††	Steel	...	LF	Knob	W T	10,000*	4.9	...	330	50	120	R-22	20.0
1600-18	16⅝	27	17⅞	2††	Steel	...	LF	Knob	W T	10,000	4.9	...	330	50	...	R-22	20.0
1600-20	16⅝	27	17⅞	2††	Steel	...	LF	Knobs	W T	8,800‡	4.1	Yes	325	45	...	R-22	20.8
1600-28-29	16⅝	27	17⅞	2††	Steel	...	LF	Knob	W T	6,800*	3.5	...	280	40	...	R-22	17.6
1750-2	26½	16⅝	12⅝	13⅝††	Steel	...	F	Knob	C	5,000*	3.6	...	175	...	...	R-12	19.2
1775-7	26½	16⅝	12⅝	13⅝††	Steel	...	F	Knob	C	5,600*	2.6	...	230	60	95	R-22	16.0
1700-3	26½	16⅝	12⅝	12⅝††	Steel	...	F	Knob	C	6,000*	2.8	...	250	65	100	R-22	20.0
1775-3-5	26½	16⅝	12⅝	12⅝††	Steel	...	F	Knob	C	6,800*	4.0	...	230	60	95	R-22	16.0
1700-1-5	26½	16⅝	12⅝	12⅝††	Steel	...	F	Knob	C	7,700*	3.8	...	250	65	100	R-22	20.8
1800-1	23⅛	27¼	18⅜	4⅝††	Steel	...	F	Knob	T	9,500*	5.5	...	310	60	120	R-22	24.0
1760-5 has AU1612 compressor, charge 20 oz., weight 125 lbs. †1620-4 has no fresh air or exhaust, charge 28.8 oz. ††Minimum projection. **Unit does not interfere with opening or closing of window—no adapter needed. *Rated under NEMA standard. ‡Approximate. ‡F—front, L—left. ¶W—normal window, C—casement, T—thru-wall.																	
Amana—Amana Refrigeration, Inc., Amana, Iowa																	
100LCS-20	13¼	25	16⅝	1⅝	Steel & P.	No	F	Knob	W C T	7,000	2.0	...	215	40	...	R-22	20
100C-20-30	13¼	25	16⅝	1⅝	Steel & P.	No	F	Knob	W C T	9,000	2.7	...	225	40	...	R-22	21
100C-20-30H	13¼	25	16⅝	1⅝	Steel & P.	No	F	Knob	W C T	9,000	2.7	8,500†	225	40	...	R-22	21.5
150C-30	15	25	20	1⅝	Steel & P.	No	F	Glider	W T	12,800	4.1	...	300	50	90	R-22	20
300C-30	15	25	20	1⅝	Steel & P.	No	F	Glider	W T	15,200	4.7	...	330	55	110	R-22	22
150C-30H	15	25	20	1⅝	Steel & P.	No	F	Glider	W T	12,800	4.1	12,100†	300	50	90	R-22	23
300C-30H	15	25	20	1⅝	Steel & P.	No	F	Glider	W T	15,200	4.7	13,700†	330	55	110	R-22	23.8
100LA-20	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	7,900	2.8	...	300	85	105	R-22	29
100A-20	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	9,000	2.7	...	300	85	105	R-22	28.5
100A-30	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	10,800	3.0	...	300	85	105	R-22	30.5
150A-30	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	14,100	4.5	...	350	90	110	R-22	36
300A-30	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	16,000	5.0	...	385	90	110	R-22	28.8
100A-30H	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	10,300	3.0	15,600	300	85	105	R-22	21.5
150A-30H	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	14,100	4.5	17,850	350	90	110	R-22	26.8
300A-30H	15	25	28	1⅝	Steel & P.	No	F	Glider	W T	16,000	5.0	19,600	385	90	110	R-22	29.8
¶W—window, C—casement, T—thru-wall. †70° DB inside, 45° dry bulb 42.9° wet bulb outside.																	
APCo—Addison Products Co., Addison, Mich.																	
W301	12¼	18⅞	15⅝	5	Steel	No	F	Knob	W P	4,000	...	...	140	...	...	R-12	8.5
‡F—Front, ¶W—normal window, P—portable.																	
Coldspot—Sears, Roebuck & Co., 925 So. Homan Ave., Chicago 7, Ill.																	
95332	16	25⅞	22¼	4	Steel	No	TL	Knob	W C T	10,500†	3.0	...	315	...	...	R-22	...
95332	16	25⅞	22¼	4	Steel	No	TL	Slide	W C T	11,500†	3.0	...	315	...	100	R-22	...
95534	16	25⅞	24¼	4	Steel	No	TL	Knob	W C T	10,500†	3.0	10,500	320	...	...	R-22	...
95336*	16	25⅞	24¼	4	Steel	No	TL	Slide	W C T	11,500†	3.5	...	320	...	100	R-22	...
95432	16	25⅞	22¼	4	Steel	No	TL	Knob	W C T	11,500†	3.2	...	325	...	...	R-22	...
95332	16	25⅞	22¼	4	Steel	No	TL	Slide	W C T	12,500†	3.2	...	325	...	100	R-22	...
95441	16	25⅞	24¼	4	Steel	No	TL	Knob	W C T	14,000†	4.0	...	370	...	...	R-22	...
95344	16	25⅞	24¼	4	Steel	No	TL	Slide	W C T	15,000†	4.0	...	370	...	100	R-22	...
95481	16	25⅞	24¼	4	Steel	No	TL	Knob	W C T	15,000†	4.5	15,000	370	...	100	R-22	...
95585	16	25⅞	24¼	4	Steel	No	TL	Slide	W C T	17,000†	5.0	...	370	...	...	R-22	...
95341	16	25⅞	24¼	4	Steel	No	TL	Slide	W C T	18,000†	5.0	...	370	...	120	R-22	...
*Reverse cycle "automatic dehumidifier" model. †T—top, L—left. ‡W—normal window, C—casement, T—thru-wall. †Rated under NEMA standard. All steel fabricated parts zinc coated.																	
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																	
W-501	12	18⅝	15⅝	4	Steel	Yes	TF	Knob	P	4,000*	1.0	...	150	...	...	R-12	8.5
W-2502	15½	27	35½	1	Steel	Yes	TF	Knob	W T	19,700*	...	...	540	...	175	R-22	33
‡F—front, T—top. *Rated under ARI standard. †W—normal window, T—thru-wall, P—portable. Special Features: Model W-501 has full width Tuck-a-way handle. Model W-2502 can also be used as an attic package unit by removal of the four air outlet grilles and the inlet grille or as a through-the-wall unit with the cabinet acting as the wall sleeve.																	
Coolerator—Coolerator Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																	
CPSB17	11⅞	16	16	7	Steel	No	FR	Knob	P	4,200*	1.54	...	150	...	...	R-12	...
S10B17	14	23	15	1⅝	Steel	No	FR	Knob	W	6,700*	2.5	...	240	50	...	R-22	...
S10B1, B2	14	23	15	1⅝	Steel	No	FR	Knob	W	8,600*	3.16	...	240	50	...	R-22	...
S11B8	15⅝	26⅝	20	3	Steel	...	FL	Knob	W	10,200*	3.79	...	300	50	...	R-22	...
SR11B2	15⅝	26⅝	20	3	Steel	...	FL	Knob	W	10,200*	3.79	8,240†	300	50	...	R-22	...
S15B2, B8	15⅝	26⅝	20	3	Steel	...	FL	Knob	W	12,600*	4.62	...	325	60	...	R-22	...
SR15B2	15⅝	26⅝	20	3	Steel	...	FL	Knob	W	12,600*	4.62	9,700†	325	50	...	R-22	...
S20B2	17⅝	26⅝	29⅝	3	Steel	...	FL	Knob	W	14,800*	5.5	...	380	60	...	R-22	...
S25B2	17⅝	26⅝	29⅝	3	Steel	...	FL	Knob	W	17,600*	6.54	...	425	60	...	R-22	...
C11B1	15⅝	26⅝	20	3	Steel	...	F	Knob	W	10,500*	3.9	...	300	50	35	R-22	...
C11B2	15⅝	26⅝	20	3	Steel	...	F	Knob	W	10,200*	3.79	...	300	50	35	R-22	...
C12B2	15⅝	26⅝	20	3	Steel	...	F	Knob	W	11,500*	4.25	...	300	50	35	R-22	...
C15B1	15⅝	26⅝	20	3	Steel	...	F	Knob	W	11,100*	4.1	...	225	50	35	R-22	...
C15B2	15⅝	26⅝	20	3	Steel	...	F	Knob	W	13,200*	4.9	...	225	50	25	R-22	...
C20B2, B8	17⅝	26⅝	29⅝	3	Steel	...	F	Knob	W	16,700*	6.2	...	380	60	40	R-22	...
CR20B2	17⅝	26⅝	29⅝	3	Steel	...	F	Knob	W	16,700*	6.2	12,300†	380	60	40	R-22	...
C25B2, B8	17⅝	26⅝	29⅝	3	Steel	...	F	Knob	W	19,100*	7.0	...	425	60	40	R-22	...
CR25B2	17⅝	26⅝	29⅝	3	Steel	...	F	Knob	W	19,100*	7.0	14,000†	425	60	40	R-22	...
‡F—front, R—right, L—left. ¶W—window, P—portable. *Rated under NEMA standard. †At 40° F. outdoor temperature. ‡S15B8—$333.95, C20B8—$402.95, C25B8—$441.95.																	
Fedders—Fedders Corp., 58-01 Grand Ave., Maspeth, N. Y.																	
912S-2	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	2.2	...	300	Yes	Yes	R-22	...
912D-2	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.5	...	340	Yes	Yes	R-22	...
910CE-2	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.5	...	350	Yes	Yes	R-22	...
912D-3	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.0	...	340	Yes	Yes	R-22	...
913C-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	3.75	...	350	Yes	Yes	R-22	...
917C-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	4.1	...	375	Yes	Yes	R-22	...
921D-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	4.6	...	450	Yes	Yes	R-22	...
922C-3	16¼	27	24⅛	2½	Steel	No	TF	Knob & PB	W	...	5.8	...	525	Yes	Yes	R-22	...
913CH-3	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.0	...	300	Yes	Yes	R-22	...
912DH-3	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.0	...	340	Yes	Yes	R-22	...
910CSH-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	3.5	...	350	Yes	Yes	R-22	...
921DH-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	4.6	...	450	Yes	Yes	R-22	...
912DFS-3	16¼	27	16½	2½	Steel	No	TF	Knob & PB	W	...	3.0	...	340	Yes	Yes	R-22	...
913FS-3	16¼	27	19⅛	2½	Steel	No	TF	Knob & PB	W	...	3.75	...	350	Yes	Yes	R-22	...
12AW-3B	16¼	27	16½	2½	Steel	No	TF	Knob & PB	T	...	...	...	340	Yes	Yes	R-22	...
12AW-3B	16¼	27	16½	2½	Steel	No	TF	Knob & PB	T	...	...	...	340	Yes	Yes	R-22	...
17BW-3B	16¼	27	19½	2½	Steel	No	TF	Knob & PB	T	...	...	...	375	Yes	Yes	R-22	...
12AWCH-3	16¼	27	16½	2½	Steel	No	TF	Knob & PB	T	...	...	...	340	Yes	Yes	R-22	...
‡F—front, T—top, ¶W—normal window, T—thru-wall.																	

Room Coolers

Model No.	Compressor Make	Hp.	Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Watts	Fan Motor B.p.m.	Hp.	Air Filter Type	Dimensions	Coils (Rows) Evap.	Cond.	Net Weight	List Price
Admiral—Admiral Corp., 3800 Cortland, Chicago 47, Ill.																		
	Tecumseh	1	AU14	115	7.5	38.0	925	96	...	...	1095	1/15	P	11¾x13	2	2	100	...
	Tecumseh	1	AU14	115	7.5	38.0	925	96	...	...	1095/990	1/15	P	11⅞x13	2	2	100	...
	Tecumseh	1	AU1612	115	11.5	45.0	1300	96	...	...	1120/1000	1/10	P	11⅞x13	3	3	110	...
	Tecumseh	1	AU1612	230	6.4	27.0	1360	90	...	...	1120/1000	1/8	P	11⅞x13	3	3	110	...
	Tecumseh	1	AU1612	230	5.6	27.0	1270	96	...	...	1120/1000	1/10	P	11⅞x13	3	3	110	...
	Tecumseh	1	AU1612	115	11.5	45.0	1300	96	...	...	1120/1000	1/10	P	11⅞x13	3	3	112	...
	Tecumseh	1	AU1612	230	5.6	27.0	1270	96	...	...	1120/1000	1/10	P	11⅞x13	3	3	112	...
	Tecumseh	1	S8N16	115	7.5	37.0	920	95	...	...	1100	1/15	D	11½x 9¼	2	3	150	...
	Tecumseh	1	S8N16	115	7.5	37.0	920	95	...	...	1100/950	1/15	P	11½x 9¼	2	3	153	...
	Tecumseh	1	S1T16 PSC	115	12.0	45.0	1300	94	...	...	1120/1000	1/12	P	11½x 9¼	3	3	151	...
	Tecumseh	1	S1T16 PSC	230	7.0	20.0	1320	88	...	...	1080	1/8	D	11½x 9¼	3	3	150	...
	Tecumseh	1	S1T16 PSC	230	7.0	20.0	1320	88	...	...	1080/980	1/8	P	11½x 9¼	3	3	152	...
	Tecumseh	1½	B32P16	115	12.0	46.5	1460	98	...	...	1100	1/10	D	11¾x17⅛	3	3	169	...
	Tecumseh	1½	B32P16	115	12.0	46.5	1460	98	...	...	1100/980	1/10	P	11¾x17⅛	3	3	171	...
	Tecumseh	1½	B32P16 PSC	230	10.8	40.5	2100	90	...	...	1075/950	1/6	P	11¾x17⅛	3	3	189	...
	Tecumseh	2	B74T16 PSC	230	12.0	50.0	2800	90	...	...	1080	1/5	D	11¾x17⅛	4	3	194	...
	Tecumseh	2	B74T16 PSC	230	11.2	50.0	2350	94	...	...	1100/980	1/6	P	11¾x17⅛	4	4	198	...
AIRditioner—Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.																		
	Tecumseh	1	...	115/208/230	14/7.75/7	45/24.7/20	1380	86	HW, Steam	...	1050/890	...	D	...	3	3	230	$535.00
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																		
	Tecumseh	1	B1616	230	8.2	35.0	1700	88.5	...	...	1050	1/10	D	11 x22½	2	3	195	...
	Tecumseh	1½	B32P16	208/230	10.7/10	40.5	2050	87	...	...	1050	1/10	D	11 x22½	2	3	200	...
	Tecumseh	2	B74T16	208/230	12.0/11	50.0	2530	94	...	...	1550	1/6	D	11 x22½	2	3	210	...
	Tecumseh	2½	...	230	13.0	55.0	3000	90	...	...	1050	1/3	D	13¼x20	4	4	235	...
	Tecumseh	1	AU1612	115	12.0	45.0	1340	92	...	...	1050	1/10	D	11¼x14⅛	2	4	157	...
	Tecumseh	1	AU1P12	230	7.5	34.1	1635	93	...	...	1050	1/10	D	11¼x14⅛	2	4	160	...
	Tecumseh	1	AU1P12	230	7.5	34.1	1655	90	...	...	1050	1/10	D	11¼x14⅛	2	4	160	...
	Tecumseh	1	AU1612	230	7.5	27.0	1340	92	R.C., Elec.	...	1050	1/10	D	11¼x14⅛	2	4	170	...
	Tecumseh	1	AU14	115	7.5	38.0	980	98	...	...	1050	1/10	D	11¼x14⅛	2	3	152	...
	Tecumseh	½	S2S16	115	7.5	37.5	980	98	...	...	1550	1/80	D	(2) 8⅝x11⅛	1	3	156	...
	Tecumseh	⅝	S6N14	115	7.5	37.5	885	96	...	...	1550	1/80	D	(2) 8⅝x11⅛	1	3	140	...
	Tecumseh	1	S1T16	115	11.9	45.0	1140	88	...	...	1550	1/80	D	(2) 8⅝x11⅛	2	4	125	...
	Tecumseh	1	S1T16	115	12.0	45.0	1225	95	...	...	1550	1/80	D	(2) 8⅝x11⅛	2	4	150	...
	Tecumseh	1	B1613	208/230	7.5/7.0	40.4/36.0	1230/1360	89/87	...	...	1550	1/30	D	12⅞x23⅝	2	4	150	...
closing of window—no adapter needed. *Rated under NEMA standard. ‡Approximate. ‡F—front, L—left. ¶W—normal window, C—casement, T—thru-wall.																		
Amana—Amana Refrigeration, Inc., Amana, Iowa																		
	Tecumseh	1	AU14	115	7.5	38.0	900	95	...	...	950/1100	1/12	P	8⅝x10⅝	3	4	110	...
	Tecumseh	1	AU1612	115/230	12/6	45/27	1300	94	...	...	950/1100	1/12	P	8⅝x10⅝	3	4	115	...
	Tecumseh	1	AU1612	115/230	12/6	45/27	1200	94	Rev. C.	...	950/1100	1/12	P	8⅝x10⅝	3	4	120	...
	Tecumseh	1½	B32P16	230	10.0	40.5	2100	95	...	...	950/1100	1/5	P	12⅝x11⅛	4	4	165	...
	Tecumseh	2	B74T16	230	11.5	50.5	2540	92	...	...	950/1100	1/5	P	12⅝x11⅛	4	6	170	...
	Tecumseh	1½	B32P16	230	10.0	40.5	2100	95	Rev. C.	...	950/1100	1/5	P	12⅝x11⅛	4	4	168	...
	Tecumseh	2	B74T16	230	11.5	50.5	2540	92	Rev. C.	...	950/1100	1/5	P	12⅝x11⅛	4	6	173	...
	Tecumseh	1	S8N16	115	7.5	37.0	850	98	...	...	950/1100	1/12	P	12⅝x11⅛	2	4	170	...
	Tecumseh	1	S1T16	115	12.0	45.0	1300	87	...	...	950/1100	1/12	P	12⅝x11⅛	3	3	168	...
	Tecumseh	1	B1516	230	8.0	29.0	1500	85	...	...	950/1100	1/10	P	12⅝x11⅛	3	2	170	...
	Tecumseh	1½	B32P16	230	9.5	40.5	2000	92	...	...	1250/1400	1/5	P	12⅝x11⅛	4	3	182	...
	Tecumseh	2	B74T16	230	11.5	50.5	2400	91	...	...	1250/1400	1/5	P	12⅝x11⅛	4	4	190	...
	Tecumseh	1	B1516	230	8.0	29.0	1500	85	R.C., Elec.	...	950/1100	1/10	P	12⅝x11⅛	3	2	175	...
	Tecumseh	1½	B32P16	230	9.5	40.5	2000	92	R.C., Elec.	...	1250/1400	1/5	P	12⅝x11⅛	4	3	186	...
	Tecumseh	2	B74T16	230	11.5	50.5	2400	91	R.C., Elec.	...	1250/1400	1/5	P	12⅝x11⅛	4	4	194	...
APCo—Addison Products Co., Addison, Mich.																		
	Tecumseh	⅛	AR-26	115	6.7	30.0	750	87	...	...	1090	1/15	D	8½x12	2	3	72	...
Coldspot—Sears, Roebuck & Co., 925 So. Homan Ave., Chicago 7, Ill.																		
	Tecumseh	1	B1613	115	12.5	50	1425	90	...	...	1075/875	1/8	D	21x9	3	3	177	...
	Tecumseh	1	B1613	115	12.5	50	1425	90	...	...	1075/875	1/8	D	21x9	3	3	178	...
	Tecumseh	1	B1613	115	12.5	50	1400	97.5	Rev. C.	1400	1075/875	1/8	D	21x9	3	3	183	...
	Tecumseh	1	B1613	115	13	50	1300	93.5	...	...	1075/875	1/8	D	21x9	4	3	178	...
B-W	1	CH298TA-2	230	8.0,	32.3	1650	87	...	...	...	1075/875	1/8	D	21x9	3	3	175	...
B-W	1	CH298TA-2	230	8.0	32.3	1650	87	...	...	...	1075/875	1/8	D	21x9	3	3	177	...
B-W	1½	CH383TA-2	230	10.2	44	2100	87	...	...	...	1075/875	1/5	D	21x9	4	4	205	...
B-W	1½	CH383TA-2	230	10.2	44	2100	87	...	...	...	1075/875	1/5	D	21x9	4	4	207	...
B-W	1½	CH383TA-2	230	10.5	44	2200	90	Rev. C.	2200	1075/875	1/5	D	21x9	4	4	210	...
Tecumseh	2	B21T18	230	12.2	52	2800	90	...	...	1075/875	1/5	D	21x9	4	4	209	...
Tecumseh	2	B21T18	230	12.2	52	2800	90	...	...	1075/875	1/5	D	21x9	4	4	211	...
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																		
	Tecumseh	⅛	AR-26	115	7.0	30.0	750	87	...	...	1150	1/15	P	8½x12	2	3	66	$149.95
	Tecumseh	2	B-21T18	230	12.0	53.6	2700	90	...	...	1130	1/3	P	22 x 9	4	3	235	429.95
**Coolerator—Coolerator Div., McGraw-Edison

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Type	Application†	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Refrigerant No. (12, 22)	Charge (Oz.)
FloatingAir—Friedrich Refrigerators, Inc., 1117 E. Commerce St., San Antonio, Texas																	
9S091	17⅞	27½	33⅝	4⅛	Steel & P.	No	—	Knob	W T	9,500*	1.7	—	360	90	—	R-22	27
9S122	17⅞	27½	33⅝	4⅛	Steel & P.	No	—	Knob	W T	12,600*	2.3	—	380	95	—	R-22	33
9S152	20⅝	28	38½	3¼	Steel & P.	No	—	Knob	W T	17,300*	3.9	—	540	135	—	R-22	65
9S242	20⅝	28	38½	3¼	Steel & P.	No	—	Knob	W T	22,900*	6.2	—	540	135	—	R-22	86
‡W—normal window, T—thru-wall. *Rated under ARI standard.																	
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																	
AS-100L	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	6,500*	1.5	—	260	—	—	R-12	21
AS-100	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	8,600*	2.0	—	260	—	—	R-22	17
AS-120	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	12,400*	4.6	—	260	—	—	R-22	19
AD-100	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	8,600*	3.0	—	260	150	100	R-22	17
AD-120	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	12,400*	4.5	—	260	150	100	R-22	19
ADR-100	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	8,600*	3.0	7,300	260	150	100	R-22	17
AI-100M	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	7,800*	2.4	—	260	150	100	R-22	17
AI-100	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	10,100*	3.5	—	260	150	100	R-12	23
AIR-100	20½	25	15⅞	Flex.	Steel & P.	Yes	F	Knob	W C T	10,100*	3.5	8,700	260	150	100	R-12	23
AI-150	16⅞	26	37½	Flex.	Steel & P.	No	F	Knob	W T	14,100*	5.4	—	400	200	150	R-22	21¾
AI-200	16⅞	26	37½	Flex.	Steel & P.	No	F	Knob	W T	16,500*	6.0	—	430	225	175	R-22	32
‡F—front, ‡W—normal window, C—casement, T—thru-wall. *Rated under ARI and NEMA standards. †Also made for 50 cycle operation. Special Features: AS-120 and AD-120 have special all outside in upper or lower sash of window, permitting window to be closed in winter (all except AI-150 and 200).																	
General Electric—General Electric Co., Appliance Park, Louisville 1, Ky.																	
R441S	15⅝	26	16⅞	16⅞	Steel	Yes	F	Knobs	W C T	6,500*	1.9	—	200	—	—	R-22	—
R461S	15⅝	26	16⅞	16⅞	Steel	Yes	F	Knobs	W C T	9,000*	3.0	—	320	—	—	R-22	—
R462S	15⅝	26	16⅞	16⅞	Steel	Yes	F	Knobs	W C T	8,500*	2.5	—	320	—	—	R-22	—
R472S	20⅛	25	19½	19½	Steel	Yes	F	Knobs	W C T	10,000*	2.9	10,000	310	—	—	R-22	—
R681S	20⅛	25	19½	19½	Steel	Yes	F	Knobs	W C T	13,000*	3.9	—	340	—	—	R-22	—
R891S	20⅛	25	19½	19½	Steel	Yes	F	Knobs	W C T	16,000*	4.8	—	340	—	—	R-22	—
R472R	15⅝	26	16⅞	16⅞	Steel	Yes	F	Knobs	W C T	10,000*	2.9	—	340	—	—	R-22	—
R435S	15⅝	26	12	—	Alum.	No	ST	Switch & K	T	5,300*	1.3	—	190	—	—	R-22	—
R475S	15⅝	26	16½	—	Alum.	No	ST	Switch & K	T	9,500*	3.0	—	340	—	—	R-22	—
‡F—front, T—top, S—side, ‡W—normal window, C—casement, T—thru-wall. *Rated under NEMA standard. †Special spine fin coils.																	
Gibson Trimline—Gibson Refrigerator Co., Div. of Hupp Corp., 515 W. Williams, Greenville, Mich.																	
A-9091	15⅛	23⅞	18½	3	Steel	Flexible	FL	Rotary	W	7,000†	1.7	—	260	45	60	R-22	—
A-9102	15⅛	23⅞	18⅛	3	Steel	Flexible	FL	Rotary	W	—	—	—	—	—	—	R-22	—
A-9102R	15⅛	23⅞	18⅛	3	Steel	Flexible	FL	Rotary	W	8,100†	2.0	8,800	260	—	—	R-23	—
A-9112	15⅛	23⅞	18⅛	3	Steel	Flexible	FL	Rotary	W	9,900†	2.75	—	260	45	60	R-22	—
B-9111S	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	10,200†	3.0	—	310	60	80	R-22	—
B-9112S	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	12,500†	3.2	—	320	60	80	R-22	—
B-9222	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	16,300†	4.7	—	400	80	120	R-22	—
B-9228	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	16,300†	4.7	—	400	80	120	R-22	—
B-9322	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	16,300†	4.7	—	400	—	—	R-22	—
B-9322R	17⅛	23⅞	24	3	Steel	Flexible	FL	Rotary	W	16,300†	4.7	17,500	400	—	—	R-22	—
C-9112	17⅛	23	30	3	Steel	Flexible	FL	Rotary	W C T	10,200†	3.0	—	310	60	80	R-22	—
C-9112H	17⅛	23	30	3	Steel	Flexible	FL	Rotary	W C	10,200†	3.0	12,600	330	70	90	R-22	—
C-9118	17⅛	23	30	3	Steel	Flexible	FL	Rotary	W T	10,200†	3.0	—	310	60	80	R-22	—
D-9071	12½	17⅝	15⅝	4	Steel	Flexible	FL	Rotary	W C	5,300†	1.3	—	160	—	—	R-22	—
‡F—front, L—left, ‡W—normal window, C—casement, T—thru-wall, †Rated under ARI standard.																	
Hotpoint—Hotpoint, Div. of General Electric Co., 5600 W. Taylor St., Chicago 44, Ill.																	
178AMP100	13½	22	14⅞	—	—	—	TL	Dial	P	7,000*	1.95	—	225	—	—	—	—
118AMP100	13½	22	14⅞	—	—	—	TL	Dial	P	8,000*	2.8	—	235	—	—	—	—
128AMP100	13½	22	14⅞	—	—	—	TL	Dial	P	8,000*	2.8	—	235	—	—	—	—
9ADK100	14⅞	24½	18⅞	—	—	—	FL	PB. Dial	W	10,000*	2.44	—	245	—	—	—	—
9ADKR100	14⅞	24½	18⅞	—	—	—	FL	PB. Dial	W	10,000*	2.44	—	245	—	—	—	—
128AML300	17⅛	34½	25⅝	—	—	—	TL	Pushbutton	W	14,500*	4.5	—	420	—	—	—	—
128ADL200	17⅛	25⅝	29⅛	—	—	—	TL	Pushbutton	W	16,000*	4.5	—	430	—	—	—	—
‡F—front, T—top, L—left, ‡W—normal window, P—portable. *Rated under ARI standard.																	
In Wall—I. W. Air Conditioning Corp., 230 Manida St., Bronx 59, N. Y.																	
100-115	22	35	16	4	Steel	—	—	PB & K	T	9,200†	—	—	260	70	120	R-22	*
100-208	22	35	16	4	Steel	—	—	PB & K	T	11,000†	—	—	300	80	140	R-22	*
150-208	22	35	16	4	Steel	—	—	PB & K	T	14,300†	—	—	320	80	140	R-22	*
LC 100-115	12	54	12	0	Steel	—	—	PB & K	T	9,200†	—	—	300	70	120	R-22	*
LC 100-208	12	54	12	0	Steel	—	—	PB & K	T	11,000†	—	—	300	80	140	R-22	*
LC 150-208	12	54	12	0	Steel	—	—	PB & K	T	14,200†	—	—	320	80	140	R-22	*
‡T—thru-wall. †Rated under ARI standard. *Less than 2 lbs. Special Features: All units can be combined with steam or hot water heating.																	
Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis, Mo.																	
X-H	16	27	28	8	Steel	No	—	Knob	W T	6,400*	—	7,000	220	—	25	R-22	16
J-H	16	27	28	8	Steel	No	—	Knob	W T	9,500*	—	7,000	340	—	50	R-22	21
K-H	16	27	28	8	Steel	No	—	Knob	W T	12,000*	—	7,000	400	—	75	R-22	27
L-H	16	27	28	8	Steel	No	—	Knob	W T	15,000*	—	7,000	500	—	120	R-22	31
I-W 50	16	27	19	4	Steel	No	—	Knob	—	4,200*	—	—	175	—	25	R-22	12
I-W 75	16	27	19	4	Steel	No	—	Knob	—	6,600*	—	—	220	—	50	R-22	16
I-W 100	16	27	19	4	Steel	No	—	Knob	—	9,500*	—	—	340	—	75	R-22	21
W	40	31	30	20	Steel	Yes	—	Knob	Con	6,400*	—	—	230	—	25	R-22	16
A	40	31	30	20	Steel	Yes	—	Knob	Con	9,500*	—	—	340	—	50	R-22	20
B	32	29	25	25	Steel	Yes	—	Knob	Con	12,000*	—	—	400	—	75	R-22	30
C	32	29	25	25	Steel	Yes	—	Knob	Con	15,000*	—	—	500	—	125	R-22	45
‡W—normal window, T—thru-wall, Con—console. *Rated under ARI standard. Special Features: Also available in direct current with open-type compressors.																	
Kelvinator, Leonard—Kelvinator Div., American Motors Corp., 14250 Plymouth Rd., Detroit 32, Mich.																	
RJ-511	12	16	16	7	Steel, Alu.	No	TR	Knob	P	4,200*	1.54	—	150	—	—	R-12	—
RJ-1051	14	23	15	1⅞	Steel, Alu.	No	TR	Knob	W	6,700*	2.5	—	240	50	—	R-22	—
RJ-1061-2	14	23	15	1⅞	Steel, Alu.	No	TR	Knob	W	8,600*	3.16	—	240	50	—	R-22	—
RJ-1552-3	15¾	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	12,400*	4.62	—	325	50	—	R-23	—
RJ-2052	17⅝	26⅜	29⅝	3	Steel, Alu.	No	TL	Knob	W	14,900*	5.5	—	360	60	—	R-22	—
RJ-2552	17⅝	26⅜	29⅝	3	Steel, Alu.	No	TL	Knob	W	17,600*	6.54	—	425	60	—	R-22	—
RJ-1091	15⅝	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	10,500*	3.95	—	300	50	35	R-22	—
RJ-1092	15⅝	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	10,200*	3.79	—	300	50	35	R-22	—
RJ-1092S	15⅝	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	11,500*	4.25	—	300	50	35	R-22	—
RJ-1591	15⅝	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	11,100*	4.12	—	325	50	35	R-22	—
RJ-1592	15⅝	26⅜	20	3	Steel, Alu.	No	TL	Knob	W	13,200*	4.92	—	325	50	35	R-22	—
RJ-2092-3	17⅝	26⅜	29⅝	3	Steel, Alu.	No	TL	Knob	W	16,700*	6.21	—	360	60	40	R-22	—
RJ-2592-3	17⅝	26⅜	29⅝	3	Steel, Alu.	No	TL	Knob	W	19,100*	7.08	—	425	60	40	R-22	—
‡T—top, R—right, L—left, ‡W—normal window, P—portable. *Rated under NEMA standard. †Electro Magnetic filter and Filtermatic Signal. All models except RJ511 feature two-directional cooling.																	
King—King Refrigerator Corp., 76-02 Woodhaven Blvd., Glendale 27, L. I., N. Y.																	
SL-1115	20½	25	16½	Adj.	Steel	Yes	F	Pushbutton	W C T	9,200	2.7	—	300	90	—	R-22	†
SL-1009	20½	25	16½	Adj.	Steel	Yes	F	Pushbutton	W C T	11,000	2.9	—	350	120	—	R-22	†
LT-102	14⅝	32½	15	Flush	Steel	—	F	Knob	T	9,200	—	—	300	75	125	R-22	†
LT-113	14⅝	32½	15	Flush	Steel	—	F	Knob	T	—	—	—	325	85	125	R-22	†
‡F—front, ‡W—normal window, C—casement, T—thru-wall. †Not over 2 lbs.																	
Kool-a-Bout—Whitehall Engineering Co., 1630 South Michigan Ave., Chicago 16, Ill.																	
WK11D	31	19	16	—	Steel	—	—	Pushbutton	P‡	10,300	—	—	385/325	—	—	R-22	—
‡P—portable, unit can be installed with special rubber tubing allowing it to be moved from room to room or can be installed with permanent piping.																	
Mobilaire—Westinghouse Electric Corp., 625 Page Blvd., Springfield 2, Mass.																	
MS107	14	24	15	6	Steel	No	F	Switch	W C P	6,500*	1.6	—	200	—	—	R-22	18.5
MS122	14	24	15	6	Steel	No	F	Switch	W C	9,200*	2.8	—	230	—	—	R-22	17.25
MS162	14	24	18	7	Steel	No	F	Switch	W C	11,900*	3.75	—	260	—	—	R-22	28.75
MS222	14	24	20	8	Steel	No	F	Switch	W C	13,400*	4.5	—	280	—	—	R-22	30.0
MD117	14	24	15	6	Steel	No	F	Switch & K	W C P	6,500*	1.7	—	200	—	32	R-22	18.5
MD132	14	24	15	6	Steel	No	F	Switch & K	W C	9,200*	2.8	—	250	—	40	R-22	17.25
MD172	14	24	18	7	Steel	No	F	Switch & K	W C	11,900*	3.75	—	260	—	42	R-22	28.75
MD232	14	24	20	8	Steel	No	F	Switch & K	W C	13,400*	4.5	—	280	—	46	R-22	30.0
MDB121	14	24	15	6	Steel	No	F	Switch & K	T	7,700*	2.4	—	230	—	44	R-22	18.0
MDB132	14	24	15	6	Steel	No	F	Switch & K	T	8,400	2.6	—	230	—	44	R-22	17.25
MDB133	14	24	15	6	Steel	No	F	Switch & K	T	8,400*	2.4	—	240	—	44	R-22	18.0
MST142	14	24	18	7	Steel	No	F	Switch	W C	11,900*	3.75	—	260	—	—	R-22	28.75
‡F—front, ‡W—normal window, C—casement, T—thru-wall, P—portable. *Rated under NEMA standard.																	

Room Coolers

Make	Compressor Hp.	Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Heating Watts	Fan Motor R.p.m.	Fan Motor Hp.	Air Filter Type	Air Filter Dimensions	Coils (Rows) Evap.	Coils (Rows) Cond.	Net Weight	List Price
FloatingAir—Friedrich Refrigerators, Inc., 1117 E. Commerce St., San Antonio, Texas																	
Tecumseh	1	S1T16	115	11.9	45	1200	94	—	—	1120	1/6	P	9¾x20½	3	2	210	—
Tecumseh	1	B1616	230	8.2	35	1690	90	—	—	1120	1/6	P	9¾x20½	3	2	220	—
Tecumseh	1½	B32P16	230	9.9	66	2160	94	—	—	1065	1/4	P	13⅝x21½	4	4	270	—
Tecumseh	2	B21U16	230	13.7	55	3000	94	—	—	1075	1/4	P	13⅝x21½	6	4	280	—
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																	
Frigidaire	—	—	115	7.5	36	905	90	—	—	1500	1/8	D	10 x15	3	2	145	$286.95
Frigidaire	—	—	208/230†	6.7/5.8	30/26	1270	91	—	—	1500	1/8	D	10 x15	3	2	150	276.95
Frigidaire	—	—	208/230	10.5/9.4	43/36	1925	87	—	—	1600/1250	1/5	D	10 x15	3	4	160	320.95
Frigidaire	—	—	208/230	6.7/5.8	30/26	1270	91	—	—	1500	1/8	D	10 x15	3	2	160	289.95
Frigidaire	—	—	208/230	10.5/9.4	43/36	1925	87	—	—	1600/1250	1/5	D	10 x15	3	4	160	332.95
Frigidaire	—	—	230†	5.8	26	1270	91	Rev. C.	—	1500	1/8	D	10 x15	3	3	150	316.95
Frigidaire	—	—	115	9.9	44.8	1150	90	—	—	1500/1300	1/8	D	10 x15	3	3	150	306.95
Frigidaire	—	—	208/230†	6.9/6.0	30/26	1350	93	—	—	1425/1300	1/8	D	10 x15	3	4	155	338.95
Frigidaire	—	—	230	6.0	26	1350	93	Rev. C.	—	1425/1300	1/8	D	10 x15	3	4	155	378.95
Frigidaire	—	—	208/230†	10.8/10.0	43/36	2100	89	—	—	1140	1/8	D	10½x22	4	4	200	389.95
Frigidaire	—	—	208/230	13.0/12.0	52/48	2400	87	—	—	1140	1/6	D	10½x22	4	4	215	449.95
HI-DRI setting for continuous operation and dehumidification. Model AIR-100 has automatic change-over from cooling to heating or vice versa. Optional mounting kits for installing unit																	
General Electric—General Electric Co., Appliance Park, Louisville 1, Ky.																	
General Elec.	1	—	115	7.5	35	900	95	—	—	1100*	1/20	P	23½x11¼	2	†	122	—
General Elec.	1	—	230	—	35	1650	90	—	—	1550	1/6	P	23½x11¼	2	†	123	—
General Elec.	1	—	115	12.0	43	1350	95	—	—	1600	1/8	P	23½x11¼	3	†	126	—
Tecumseh	1	—	230	—	34	1720	90	R. C., E.	3000	1575	1/8	P	17⅝x 9⅝	3	3	172	—
Tecumseh	1½	—	230	—	46	2400	85	—	—	1550	1/5	P	17⅝x 9⅝	4	3	180	—
Tecumseh	2	—	230	—	52	2800	92	—	—	1600	1/6	P	17⅝x 9⅝	5	4	175	—
General Elec.	1	—	230	—	29	1575	98	—	—	1650	1/6	P	19 x11	2	†	122	—
General Elec.	1	—	230	—	25	1600	90	—	—	1640	1/15	P	19 x11	†	†	105	—
General Elec.	1	—	230	—	29	1575	98	—	—	1625	1/6	P	19 x11	3	†	126	—
Gibson Trimline—Gibson Refrigerator Co., Div. of Hupp Corp., 515 W. Williams, Greenville, Mich.																	
Tecumseh	1	AU-14	115	7.5	38	920	95	—	—	1100	1/10	D	10½x16⅝	2	2	125	—
Tecumseh	1	AU-1612	230	7.0	39	1350	90	—	—	1100	1/10	D	10½x16⅝	2	2	130	—
Tecumseh	1	S1T16	230	7.0	20	1250	90	Rev. C.	—	1100	1/10	D	10½x16⅝	2	2	140	—
Tecumseh	1	AU1P12	230	8.0	34.1	1450	90	—	—	1100	1/10	D	10½x16⅝	3	3	130	—
Tecumseh	1	B1613	115	12.0	45	1350	90	—	—	1100	1/10	D	10½x16⅝	3	3	200	—
Tecumseh	1	B1616	230	10.0	29	1475	88	—	—	1100	1/8	P	10½x16⅝	4	3	200	—
Tecumseh	2	B74T16	230	12.0	50	2700	88	—	—	1550	1/4	P	10½x16⅝	4	3	215	—
Tecumseh	2	B74T16	208	12.0	50	2700	88	—	—	1550	1/4	P	10½x16⅝	4	3	215	—
Tecumseh	2	B74T16	230	12.0	50	2700	88	—	—	1550	1/4	P	10½x16⅝	4	3	215	—
Tecumseh	2	B74T16	230	12.0	50	2700	88	Rev. C.	—	1550	1/4	P	10½x16⅝	4	3	215	—
Tecumseh	1	AU-1P12	230	8.0	34.1	1450	88	—	—	1100	1/8	P	10½x16⅝	4	3	180	—
Tecumseh	1	B1516	230	9.0	29	1500	90	R. C., E.	—	1100	1/8	P	10½x16⅝	4	3	200	—
Tecumseh	1	AU-1P12	208	8.0	50	2700	88	—	—	1100	1/8	P	10½x16⅝	4	3	215	—
Tecumseh	1	AU-14	115	7.5	38	900	95	—	—	1550	1/12	D	9 x14½	2	3	82	—
Hotpoint—Hotpoint, Div. of General Electric Co., 5600 W. Taylor St., Chicago 44, Ill.																	
—	1	—	115	7.5	—	—	—	—	—	—	—	P	—	—	—	98	—
—	1	—	115	12.0	—	—	—	—	—	—	—	P	—	—	—	98	—
—	1	—	230	6.5	—	—	—	—	—	—	—	P	—	—	—	98	—
—	1	—	230	—	—	—	—	—	—	—	—	P	—	—	—	125	—
—	1	—	230	—	—	—	—	—	—	—	—	P	—	—	—	125	—
—	2	—	230	—	—	—	—	—	—	—	—	P	—	—	—	180	—
—	2	—	230	—	—	—	—	—	—	—	—	P	—	—	—	185	—
In Wall—I. W. Air Conditioning Corp., 230 Manida St., Bronx 59, N. Y.																	
Tecumseh	1	S1T16	115	12.0	40	—	87	—	—	1050/960	—	D	8x30	2	3	190	—
Tecumseh	1	B1516	208	9.2	39	—	85	—	—	1050/960	—	D	8x30	3	4	210	—
Tecumseh	1½	B32P16	208	11	40	—	85	—	—	1050/960	—	D	8x30	3	5	225	—
Tecumseh	1	S1T16	115	12.0	40	—	87	—	—	1050/960	—	D	8x30	3	3	200	—
Tecumseh	1	B1516	208	9.3	39	—	87	—	—	1050/960	—	D	8x30	3	4	210	—
Tecumseh	1½	B32P16	208	11.2	40	—	87	—	—	1050/960	—	D	8x30	3	5	220	—
Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis, Mo.																	
Tecumseh	¾	—	115	—	—	1100	85	—	7,000	—	1/12	P	11x11	2	2	150	$320.00
Tecumseh	1	—	230	—	—	1700	85	—	7,000	—	1/12	P	12x12	2	3	160	330.00
Tecumseh	1½	—	220	—	—	2100	85	—	7,000	—	1/10	P	12x14	3	3	200	400.00
Tecumseh	2	—	230	—	—	2400	85	—	7,000	—	1/10	P	12x14	3	3	240	450.00
Tecumseh	½	—	115	—	—	750	85	—	7,000	—	1/12	P	11x11	2	2	135	316.00
Tecumseh	¾	—	220	—	—	1100	85	—	7,000	—	1/12	P	12x12	2	3	156	335.00
Tecumseh	1	—	220	—	—	1700	85	—	7,000	—	1/10	P	12x14	3	3	190	430.00
Tecumseh	¾	—	115	—	—	1100	85	—	Opt.	1050	1/8, 1/6	P	10x30	3	4	320	655.00
—	1	—	220	—	—	2000	85	—	Opt.	1050	1/8, 1/6	P	12x20	3	4	375	755.00
—	1½	—	220	—	—	2300	85	—	Opt.	1050	(2) 1/6	P	12x24	3	6	450	908.00
—	2	—	220	—	—	2700	85	—	Opt.	1050	(2) 1/6	P	14x24	3	6	535	1,045.00
Kelvinator, Leonard—Kelvinator Div., American Motors Corp., 14250 Plymouth Rd., Detroit 32, Mich.																	
Tecumseh	½	—	115	7½	—	—	85	—	—	1550	1/25	P	—	3	3	65	—
Tecumseh	1	—	115	7½	—	—	97	—	—	1550/1350	1/10	P	—	3	3	98	—
Tecumseh	1	—	115/230	12/7½	—	—	97	—	—	1550/1350	1/10	P	—	3	3	98	—
Tecumseh	1½	—	230/208	10	—	—	93	—	—	1000	1/10	P	—	3	3	195	—
Tecumseh	2	—	230	11	—	—	92	—	—	1000	1/7	P	—	3	3	225	—
Tecumseh	2½	—	230	13	—	—	92	—	—	1000	1/7	P	—	4	4	235	—
Tecumseh	1	—	115	13	—	—	98	—	—	1050/900	1/9	†	—	3	3	180	—
Tecumseh	1	—	230	8	—	—	87	—	—	1050/900	1/9	†	—	2	3	185	—
Tecumseh	1	—	230	8	—	—	93	—	—	1050/900	1/9	†	—	3	3	190	—
Tecumseh	1½	—	115	12	—	—	90	—	—	1050/900	1/9	†	—	3	3	195	—
Tecumseh	1½	—	230	10	—	—	95	—	—	1050/900	1/9	†	—	3	3	195	—
Tecumseh	2	—	230/208	11	—	—	89	—	—	1050/900	1/6	†	—	3	3	230	—
Tecumseh	2½	—	230/208	12	—	—	92	—	—	1050/900	1/6	†	—	4	4	240	—
King—King Refrigerator Corp., 76-02 Woodhaven Blvd., Glendale 27, L. I., N. Y.																	
Tecumseh	1	S1T16	115	12.0	45.0	1300	89	—	—	1550	1/20	P	14 x10½	2	3	188	—
Tecumseh	1	B1516	230	6.8	22.5	1480	85	—	—	1550	1/20	P	14 x10½	3	3	191	—
Tecumseh	1	S1T16	115	12.0	45.0	1350	87	—	—	1550	1/25	P	7 x28⅛	3	3	190	—
Tecumseh	1	AU1P12	230	6.8	—	—	—	—	—	1550	1/15	P	7 x28⅛	4	3	198	—
Kool-a-Bout—Whitehall Engineering Co., 1630 South Michigan Ave., Chicago 16, Ill.																	
Tecumseh	¾	—	115	9.5	—	1100	—	—	—	—	—	P	12½x16	3	—	164	$379.95
Mobilaire—Westinghouse Electric Corp., 625 Page Blvd., Springfield 2, Mass.																	
Tecumseh	1	AU-14	115	7.5	39.0	900	96	—	—	1080	.072	P	6⅞x23¾	2	3	94	—
Tecumseh	1	AU1P12	230	7.2	34.1	1550	93	—	—	1330/1030	.072	P	6⅞x

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location†	Type	Application†	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Refrigerant No. (12, 22)	Charge (Oz.)	Compressor Make	Hp.	Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Watts	Fan Motor R.p.m.	Hp.	Air Filter Type	Dimensions	Coils (Rows) Evap.	Cond.	Net Weight	List Price
Mathes—The Mathes Co., Div. of Glen Alden Corp., 1521 East Broadway, Fort Worth, Texas																																		
1019S	17½	26	22	1½	Alum.	No	FL	Knob	W	8.700*	2.7	...	380	...	No	R-22	24	Copeland	1	UU7	115	11.4	44.0	1380	90	...	...	1075	1/8	D	17½x16¼	2	2	170	...
1029S	17½	26	22	1½	Alum.	No	FL	Knob	W	9.000*	2.7	...	380	...	No	R-22	26	Tecumseh	1	S1T16	230	6.0	20.0	1270	90	...	...	1075	1/8	D	17½x16¼	2	2	170	...
1079D	17½	26	22	1½	Alum.	No	FL	Knob	W	8.500*	3.2	...	310	...	No	R-22	27	Tecumseh	1	B8413	115	7.5	37.0	900	98	...	...	1075	1/12	P	15⅝x13⅞	2	2	150	...
1019C	17½	26	22	2	Alum.	No	FL	Knob	W	10.500*	3.0	...	410	...	Yes	R-22	30	Tecumseh	1	B1613	115	11.0	45.0	1425	96	...	...	1075	1/8	P	15⅞x13⅞	2	3	190	...
1019HP	17½	26	22	1½	Alum.	No	FL	Knob	W	10.000*	3.0	10.000	410	...	No	R-22	...	Tecumseh	1	B1613	115	11.0	45.0	1360	94	...	...	1075	1/8	D	17½x16¼	2	3	185	...
1029D	17½	26	22	1½	Alum.	No	FL	Knob	W	10.500*	3.0	...	410	...	No	R-22	26	B-W	1	CH286	230	7.2	30.0	1475	93	...	...	1075	1/8	P	15¾x13¾	2	3	190	...
1029C	17½	26	22	2	Alum.	No	FL	Knob	W	10.500*	3.0	...	410	...	Yes	R-22	26	B-W	1	CH286	230	7.2	30.0	1475	93	...	...	1075	1/8	P	15¾x13¾	2	3	190	...
1029CHP	17½	26	22	2	Alum.	No	FL	Knob	W	10.000*	3.0	10.000	385	...	Yes	R-22	26	B-W	1	CH286	230	7.2	30.0	1410	93	Rev. C.	1760	1075	1/6	P	15¾x13¾	2	3	195	...
10H29C	17½	26	26	2	Alum.	No	FL	Knob	W	13.500*	4.2	...	465	...	Yes	R-22	34	Copeland	1	UH9	230	7.4	29.5	1680	98	...	...	1075	1/5	P	15⅞x13⅞	3	3	200	...
10H29CHP	17½	26	26	3	Alum.	No	FL	Knob	W	12.900*	4.2	12.900	435	...	Yes	R-22	39	Copeland	1	UH9	230	7.2	29.5	1610	98	Rev. C.	2200	1075	1/5	P	15⅞x13⅞	3	3	205	...
1539C	17½	26	26	3	Alum.	No	FL	Knob	W	15.600*	5.4	...	480	...	Yes	R-22	38	B-W	1½	CH383	230	9.5	30.0	2310	93	...	...	1075	1/5	P	15⅞x13⅞	4	4	210	...
1539CHP	17½	26	26	3	Alum.	No	FL	Knob	W	14.700*	5.4	14.700	455	...	Yes	R-22	40	B-W	1½	CH383	230	9.5	30.0	2280	93	Rev. C.	2200	1075	1/5	P	15⅞x13⅞	4	4	215	...
1829D	17½	26	26	1½	Alum.	...	FL	Knob	W	17.000*	6.8	...	505	...	No	R-22	38	B-W	2	CH420	230	11.7	50.0	2500	92	...	...	1075	1/5	D	17½x16¼	4	4	210	...
2029C	19½	27⅞	26½	2	Alum.	...	FL	Knob	W	19.500*	6.8	...	530	...	Yes	R-22	43	B-W	2	CH490	230	12.6	48.0	2700	94	...	...	1075	1/3	P	17⅞x14½	3	3	260	...
2029CHP	19½	27⅞	26½	2	Alum.	...	FL	Knob	W	18.500*	6.8	18.500	480	...	Yes	R-22	38	B-W	2	CH490	230	12.6	48.0	2540	94	Rev. C.	2780	1075	1/3	P	17⅞x14½	3	3	255	...
2529C	19½	27⅞	26½	2	Alum.	...	FL	Knob	W	23.500*	7.5	...	580	...	Yes	R-22	63	B-W	2½	CH490	230	13.0	48.0	2850	96	...	...	1075	1/3	P	17⅞x14½	4	4	260	...
2529CHP	19½	27⅞	26½	2	Alum.	...	FL	Knob	W	22.300*	7.5	22.300	535	...	Yes	R-22	59	B-W	2½	CH490	230	13.0	48.0	2710	96	Rev. C.	2780	1075	1/3	P	17⅞x14½	4	4	265	...
1029TW	21⅝	32½	11½	11	Alum.	...	FL	Knob	T Con	10.200*	3.2	...	325	...	Yes	R-22	39	B-W	1	CH286	230	7.0	30.0	1475	92	...	...	1075	1/5	P	16 x19½	2	3	170	...
1029TWHP	21⅝	32½	11½	11	Alum.	...	FL	Knob	T Con	9.700*	3.2	9.700	300	...	Yes	R-22	43	B-W	1	CH286	230	7.0	30.0	1400	92	Rev. C.	1000	1075	1/5	P	16 x19½	2	3	175	...
1529TW	21⅝	34½	12½	11	Alum.	...	FL	Knob	T Con	13.500*	3.8	...	425	...	Yes	R-22	41	B-W	2	CH420	230	11.2	50.0	2300	90	...	...	1075	...	P	16 x19½	3	3	190	...
1529TWHP	21⅝	34½	12½	11	Alum.	...	FL	Knob	T Con	12.900*	3.8	12.900	395	...	Yes	R-22	...	B-W	2	CH420	230	11.2	50.0	2190	90	Rev. C.	1500	1075	...	P	16 x19½	3	3	195	...

†F—front, L—left, †W—normal window, T—thru-wall, Con—console, *Rated under ARI standard.

Newport—Warren Webster & Co., Camden, N. J.																																		
500	25	36	9½	9½	Steel	...	...	Knob	...	5.300	...	16.000	220	...	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
750	25	36	9½	9½	Steel	...	...	Knob	...	7.500	...	18.500	300	...	110	...	...	...	...	...	115/208/230	6.0*	...	1180	88.5*	...	...	...	...	...	...	...	...	...
1000	25	36	9½	9½	Steel	...	...	Knob	...	9.000	...	19.600	335	...	120	...	...	...	...	...	208/230	7.9*	...	1340	88.5*	...	...	...	...	...	...	...	...	...
500C	25	36	9½	9½	Steel	...	...	Knob	...	5.300	...	...	300	...	90	...	...	...	...	...	115	7.5	...	790	90	...	...	...	...	...	...	...	...	...
750C	25	36	9½	9½	Steel	...	...	Knob	...	7.500	...	...	375	...	110	...	...	...	...	...	115/208/230	6.0*	...	1180	88.5*	...	...	...	...	...	...	...	...	...
1000C	25	36	9½	9½	Steel	...	...	Knob	...	9.000	...	...	300	...	120	...	...	...	...	...	208/230	7.9*	...	1340	88.5*	...	...	...	...	...	...	...	...	...

*At 230 volts.

Northern-Aire—Great Northern Mfg. Corp., 1056 N. Wood St., Chicago, Ill.																																		
RA-75-1	16⅞	22½	31⅜	14⅜	Steel	No	FRL	Knob	W	7.000	2.0	...	250	55	115	R-22	...	...	⅔	...	115	10.4	...	990	...	...	...	1050	1/10	D	17½x 9¾	...	...	155	...
RA-75-2	16⅞	22½	31⅜	14⅜	Steel	No	FRL	Knob	W	8.000	2.25	...	250	55	115	R-22	...	...	⅔	...	115	7.4	...	950	...	...	...	1050	1/15	P	17½x 9¾	...	...	155	...
RA-75-3	16⅞	22½	31⅜	14⅜	Steel	No	FRL	Knob	W	8.500	2.5	4.600	275	60	125	R-22	...	...	⅔	...	115	11.9	...	1150	...	Electric	1320	1050	1/10	P	17½x 9¾	...	...	155	...
RA-100-1	16⅞	22½	31⅜	14⅜	Steel	No	FRL	Knob	W	10.800	3.0	5.600	310	75	150	R-22	...	...	1	...	230	7.9	...	1550	...	Electric	1600	1050	1/8	P	17½x 9¾	...	...	180	...
RA-100-2	16⅞	22½	31⅜	14⅜	Steel	No	FRL	Knob	W	10.800	3.0	4.600	310	75	150	R-22	...	...	1	...	208	8.9	...	1550	...	Electric	1320	1050	...	P	17½x 9¾	...	...	180	...
RA-150-1	19	26⅜	32	14⅜	Steel	No	FR	Knob	W	16.000	4.0	7.000	450	100	200	R-22	...	...	1½	...	230	11.0	...	2150	...	Electric	2050	...	...	P	17½x 9¾	...	...	200	...
RA-150-2	19	26⅜	32	14⅜	Steel	No	FR	Knob	W	16.000	4.0	6.050	450	100	200	R-22	...	...	1½	...	208	12.0	...	2150	...	Electric	1750	...	...	P	17½x 9¾	...	...	200	...
RA-200-1	19	26⅜	32	14⅜	Steel	No	FR	Knob	W	20.000	5.5	7.000	550	120	225	R-22	...	...	2	...	230	11.0	...	2500	...	Electric	2050	...	...	P	17½x 9¾	...	...	230	...
RA-200-2	19	26⅜	32	14⅜	Steel	No	FR	Knob	W	20.000	5.5	6.050	550	120	225	R-22	...	...	2	...	208	12.0	...	2500	...	Electric	1750	...	...	P	17½x 9¾	...	...	230	...

†F—front, R—right, L—left, †W—normal window. Special Features: Quiet-Guard for faster, quiet cooling.

Northwind—The Emerson Electric Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.																																		
AC9-13-15P	12½	17⅜	15¾	4	Steel	...	F	Knob	P	3.200*	0.7	...	140	...	...	R-12	...	Tecumseh	...	...	115	7.0	23.0	610	79	...	...	...	1/20	P	9 x14	1	2	68	$129.95
AC9-10-15LT	15⅝	23⅞	18¼	2½	Steel	...	F	Knob	W	7.000*	2.1	...	270/230	45	60	R-22	...	Tecumseh	1	...	115	7.5	38.0	875	93	...	...	...	1/10	P	10½x16⅝	2	2	109	279.95
AC9-10-30T	17⅜	23⅞	24	2½	Steel	...	F	Knob	W	11.000*	3.2	...	310/270	60	80	R-22	...	Tecumseh	1	...	230	8.8	34.1	1450	88	...	...	...	1/8	P	10½x16⅝	3	3	119	329.95
AC9-20-30T	17⅜	23⅞	24	2½	Steel	...	F	Knob	W	17.000*	4.34	...	400/350	90	120	R-22	...	Tecumseh	2	...	230	12.5	50.0	2700	88	...	...	...	1/4	P	10½x16⅝	4	3	200	399.95
AC9-10-30TR	17⅜	23	30½	2½	Steel	...	F	Knob	W T	10.500*	3.2	11.500	310/280	60	80	R-22	...	Tecumseh	1	...	230	8.0	29.0	1500	88	R.C. & E.	3000	...	1/4	P	10½x16⅝	3	4	165	429.95
AC9-20-30TR	17⅜	23⅞	24	2½	Steel	...	F	Knob	W T	16.500*	4.3	14.500	400/350	90	120	R-22	...	Tecumseh	2	...	230	12.5	50.0	2600	88	R.C. & E.	3000	...	1/4	P	10½x16⅝	4	4	205	459.95

†F—front, †W—normal window, T—thru-wall, P—portable, *Rated under ARI standard.

Olympic—Olympic Radio & Television, Long Island City 1, N. Y.																																		
OW775D	16⅝	26½	30⅝	5	Steel & F.	Yes	FTR	Knob	W	6.200*	...	...	280	...	...	R-22	...	Gibson	⅔	...	115	7.5	...	900	90	...	...	1070	.035	D	13 x14	2	3	160	...
OWT100D	16⅝	26½	30⅝	5	Steel & F.	Yes	FTR	Knob	W	8.200*	...	...	320	...	...	R-22	...	Gibson	1	...	115	12.0	...	1250	87	...	...	1070	1/10	D	13 x14	2	3	175	...
OW6100D	16⅝	26½	30⅝	5	Steel & F.	Yes	FTR	K & PB	W	9.400*	...	...	340	...	...	R-22	...	Tecumseh	1	...	230	8.0	...	1340	86	...	...	1070	1/10	D	13 x14	3	4	175	...
OW7200D	16⅝	26½	33⅝	5	Steel & F.	Yes	FTR	K & PB	W	16.000*	...	...	500	...	...	R-22	...	Tecumseh	2	...	230	12.0	...	2600	90	...	...	1550	1/5	D	13 x14	4	4	230	...
OT785C	20½	26⅝	17⅞	4	Steel & F.	Yes	FL	K & PB	W	6.200*	...	...	280	15	65	R-22	...	Tecumseh	⅔	...	115	7.5	...	800	90	...	...	1050	1/10	P	12 x15	2	4	160	...
OT7110C	20½	26⅝	17⅞	4	Steel & F.	Yes	FL	K & PB	W	8.200*	...	...	340	25	80	R-22	...	Tecumseh	1	...	115	12.0	...	1250	95	...	...	1050	1/8	P	12 x15	2	4	175	...
OW8100S	15⅝	26⅝	18¼	2½	Steel & F.	Yes	FBL	Knob	W	7.000*	...	...	270	...	...	R-22	...	Tecumseh	1	...	230	7.5	...	900	90	...	...	1100	1/12	D	16⅝x10½	1¼	1½	141	...
OW8110D	15⅝	26⅝	18¼	2½	Steel & F.	Yes	FBL	Knob	W	6.700*	...	...	270	...	...	R-22	...	Tecumseh	1	...	115	7.5	...	900	90	...	...	1100	1/12	D	16⅝x10½	2	2	141	...
OW8300D	17⅝	26⅝	24	2½	Steel & F.	Yes	FBL	Knob	W	16.000*	...	...	450	...	...	R-22	...	Tecumseh	2	...	230	12.0	...	2600	90	...	...	1550	1/6	D	16⅝x10½	4	4	221	...

†F—front, T—top, R—right, L—left, B—bottom, †W—normal window. *Rated under ARI standard.

Philco—Philco Corp., C and Tioga Sts., Philadelphia 34, Pa.																																		
A1094-11	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	11.500*	3.1	...	330	Yes	Yes	R-22	33	Tecumseh	1	B1616	230	9	35	1700	93	...	...	815/700	1/12	P	12x12	3	4	178	$299.95
A1282-2	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	10.500*	2.9	...	285	Yes	Yes	R-22	30	Tecumseh	1	B1613	115	12	45	1290	95	...	...	1050/900	1/12	P	12x12	4	5	177	339.95
A1284-11	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	13.000*	3.4	...	355	Yes	Yes	R-22	32	Tecumseh	1	B1616	230	9	35	1750	91	...	...	1050/900	1/6	P	12x12	4	5	183	339.95
A2084-11	16⅜	27	21¼	2⅜	Steel	No	F	PB & K	W	15.000*	4.1	...	355	Yes	Yes	R-22	32	Tecumseh	2	B74T16	230	12	50	2450	93	...	...	1050/900	1/6	P	12x12	4	5	193	389.95
A1582-11	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	14.500*	3.5	...	470	Yes	Yes	R-22	32	Tecumseh	1½	B32P16	230	10	40.5	2060	92	...	...	1130/975	1/4	P	12x12	4	5	183	369.95
A2082-11	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	16.000*	4.3	...	470	Yes	Yes	R-22	33	Tecumseh	2	B74T16	230	12	50	2475	94	...	...	1130/975	1/4	P	12x12	4	5	193	389.95
A1082-2	16⅜	27	21½	2⅜	Steel	No	F	PB & K	W	8.400*	1.6	...	345	Yes	Yes	R-22	22	Tecumseh	1	S1T16	115	12	45	1200	92	...	...	815/700	1/12	D	12x13	2	3	170	289.95
A1082-23	16⅜	27	21¼	2⅜	Steel	No	F	PB & K	W	8.400*	1.6	...	345	Yes	Yes	R-22	22	Tecumseh	1	S1T16	230/208	6/7	20	1200	93	...	...	815/700	1/12	D	12x13	2	3	170	289.95
A1083-2	16⅜	27	21¼	2⅜	Steel	No	F	PB & K	W	8.000*	1.6	...	285	Yes	Yes	R-22	30	Tecumseh	1	B8513	115	7½	37	960	95	...	...	1050/900	1/12	D	12x13	2	5	177	259.95
A1086-23	16⅜	27	21¼	2⅜	Steel	No	F	PB & K	W	8.200*	1.6	8.000	345	Yes	Yes	R-22	22	Tecumseh	1	S1T16	230/208	6/7	20	1200	93	Rev. C.	...	815/700	1/12	D	12x13	2	3	173	269.95
A983-2	12⅞	24⅝	13⅞	2⅜	Steel	Yes	TR	K	W C	5.600*	1.7	...	195	Yes	No	R-22	16½	Tecumseh	1	S8N16	115	7½	37	900	95	...	...	1600/1350	1/12	D	10⅝x15½	2	2 & 1	126	149.95
A984-2	12⅞	24⅝	13⅞	2⅜	Steel	Yes	TR	K	W C	6.600*	2.0	...	210	Yes	No	R-22	20	Tecumseh	1	S1T16	115	12	45	1230	92	...	...	1600/1350	1/12	D	10⅝x15½	2	2 & 1	127	149.95
A984-11	12⅞	24⅝	13⅞	2⅜	Steel	Yes	TR	K	W C	6.600*	2.0	...	210	Yes	No	R-22	20	Tecumseh	1	S1T16	230	7½	20	1230	92	...	...	1600/1350	1/12	D	10⅝x15½	2	2 & 1	127	149.95

*Rated under ARI and NEMA standards. †F—front, TR—top right, †W—normal window, C—casement.

Quiet Kool—Emerson Radio & Phonograph Corp., 14th & Coles Sts., Jersey City 2, N. J.																																		
500	12⅜	21	11½	6¼	Steel & P.	No	TL	Knob	W P	2.650*	1.0	...	135	...	...	R-12	...	Tecumseh	½	...	115	7.5	30.0	800	85	...	...	1500	1/10	P	9¼x12	1	1	60	...
6U7A-S	14½	24⅞	16	6½	Steel & P.	No	FL	P.B.†	W T C‡	6.500*‡	1.6	...	190	50	...	R-22	...	Tecumseh	1	...	115	7.5	38.0	900	99	...	...	1060/925	1/8	P	12½x14	2	2	112	...
8U1A-S	14½	24⅞	16	6½	Steel & P.	No	FL	P.B.†	W T C‡	8.000*‡	2.0	...	240	60	...	R-22	...	Tecumseh	1	...	115	12.0	45.0	1460	95	...	...	1060/925	1/6	P	12½x14	2	2	115	...
8U2A-S	14½	24⅞	16	6½	Steel & P.	No	FL	P.B.†	W T C‡	8.000*‡	2.0	...	240	60	...	R-22	...	Tecumseh	1	...	230/208	8.5	27.0	1450	90	...	...	1060/925	1/6	P	12½x14	2	2	115	...
10U2A-S	14½	24⅞	16	6½	Steel & P.	No	FL	P.B.†	W T C‡	10.000*‡	2.5	...	280	70	...	R-22	...	Tecumseh	1	...	230/208	9.0	34.1	1700	90	...	...	1060/925	1/5	P	12½x14	3	2	130	...
5T9	16½	27⅛	17⅛	3½	Steel & P.	No	FL	Knob	T	6.500*	1.6	...	240	70	80	R-22	...	Tecumseh	1	...	115	9.0	38.0	1050	90	...	...	1050/900	1/12	P	9½x26½	2	3	165	...
9T1	16½	27⅛	17⅛	3½	Steel & P.	No	FL	Knob	T	8.400*	2.1	...	280	70	80	R-22	...	Tecumseh	1	...	115	12.0	45.0	1300	95	...	...	1050/900	1/10	P	9½x26½	3	2	165	...
9T2	16½	27⅛	17⅛	3½	Steel & P.	No	FL	Knob	T	10.000*	2.5	...	320	85	100	R-22	...	Tecumseh	1	...	230/208	10.0	34.1	1700	90	...	...	1050/900	1/8	P	9½x26½	3	2	165	...
15T2	16½	27⅛	17⅛	3½	Steel & P.	No	FL	Knob	W T C	12.500*	3.5	...	380	100	120	R-22	...	Tecumseh	1½	...	230/208	13.0	46.0	2150	90	...	...	1050/900	1/5	P	9½x26½	4	2	175	...
20T2	16½	27⅛	17⅛	3½	Steel & P.	No	FL	Knob	W T C	15.000*	4.6	...	450	120	140	R-22	...	Tecumseh	2	...	230/208	15.0	53.6	2550	90	...	...	1350/1100	1/3	P	9½x26½	4	2	180	...

†F—front, T—top, L—left, †W—normal window, C—casement, T—thru-wall, P—portable, *Rated under NEMA standard. ‡Based on engineering samples. †Damper mechanically interlocked with pushbutton operation. †"A" models window only. Install automatically by sliding out rigid side panels.

RCA Whirlpool—Whirlpool Corp., St. Joseph, Mich.																																		
F-8100-2	17⅞	25⅞	17⅞	Flush	Steel	Yes	LF	Knob	W	8.800*	2.7	...	310	80	130	R-22	18	Tecumseh	1	S1T16	115	12.0	48.5	1300	94	...	...	1050	1/8	D	14¾x8	2	2	170	...
D-8100-2	17⅞	25⅞	17⅞	Flush	Steel	Yes	LF	K & PB	W	8.800*	2.7	...	310	80	130	R-22	18	Tecumseh	1	S1T16	115	12.0	48.5	1300	94	...	...	1050	1/8	D	14¾x8	3	3	170	...
D-8150-2	17⅞	25⅞	19⅞	Flush	Steel	Yes	LF	K & PB	W	13.000*	4.0	...	340	100	150	R-22	23	Tecumseh	1½	B32P16	230	9.8	45.5	2100	88	...	...	1050	1/6	D	14¾x8	3	3	180	...
CP-100A-2	17⅞	25⅞	20½	Flush	Steel	Yes	LF	Knob	W	7.000*	2.3	...	280	75	110	R-22	22	Tecumseh	1	S8N16	115	7.5	37.0	850	97	...	...	1050	1/10	D	20¾x10⅝	2	2	172	...
C-100A-3	17⅞	25⅞	20½	Flush	Steel	Yes	LF	Knob	W	10.000*	3.0	...	315	90	130	R-22	17	Tecumseh	1	E15J6	230	7.8	29.0	1500	88	...	...	1050	1/8	D	20¾x10⅝	2	2	177	...
C-150A-3	17⅞	25⅞	20½	Flush	Steel	Yes	LF	Knob	W	13.500*	4.2	...	350	110	160	R-22	24	Tecumseh	1½	B32P16	230	9.8	46.2	2300	89	...	...	1050	1/6	D	20¾x10⅝	3	4	185	...
C-200A-3	17⅞	25⅞	20½	Flush	Steel	Yes	LF	Knob	W	15.500*	4.7	...	400	140	190	R-22	27	Tecumseh	2	B74T16	230	12.0	52.0	2300	93	...	...	1050	1/5	D	20¾x10⅝	4	4	210	...
I-8100-3	17⅞	25⅞	19⅞	Flush	Steel	Yes	LF	Knob	W	11.000*	3.4	...	315	100	145	R-22	24	B-W	1	CH286	230	8.0	31.0	1550	86	...	...	1050	1/8	P	20¾x 6¾	3	3	185	...
IW-8100-3	17⅞	25⅞	19⅞	Flush	Steel	Yes	LF	Knob	T	11.000*	3.4	...	315	100	145	R-22	24	B-W	1	CH286	230	8.0	31.0	1550	86	...	...	1050	1/8	P	20¾x 6¾	3	3	175	...
I-8200-3	17⅞	25⅞	22⅞	Flush	Steel	Yes	LF	Knob	W	16.500*	4.8	...	410	145	185	R-23	27	Tecumseh	2	B74T16	230	12.0	52.0	2450	92	...	...	1050	1/5	P	20¾x 6¾	4	4	210	...

†F—front, L—left, †W—normal window, T—thru-wall, *Rated under NEMA standard. Special Features: Weather sealed cabinet on Custom and Imperial models. Ligh

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Controls Type	Application‡	Capacities Cooling (B.t.u.h.)	Capacities Dehum. (Pts./Hr.)	Capacities Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Air Capacities (C.f.m.) Fresh	Air Capacities (C.f.m.) Exhaust	Refrigerant No. (11, 22)	Refrigerant Charge (Oz.)
Thomas A. Edison—McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																	
TP50B17	11⅞	16	16	7	Steel	No	FR	Knob	P	4,200*	1.54	—	150	—	—	R-12	—
TD100B17	14	23	15	1⅞	Steel	No	FR	Knob	W	6,700*	2.5	—	240	50	—	R-22	—
TD100B1, B2	14	23	15	1⅞	Steel	No	FR	Knob	W	6,600*	3.16	—	240	50	—	R-22	—
TD110B8	15⅝	26⅝	20	3	Steel	—	FL	Knob	W	10,200*	3.79	8,240†	300	50	—	R-22	—
TDR110B2 *	15⅝	26⅝	20	3	Steel	—	FL	Knob	W	10,200*	3.79	8,240†	300	50	—	R-22	—
TD150B2, B8	15⅝	26⅝	20	3	Steel	—	FL	Knob	W	12,400*	4.62	—	325	50	—	R-22	—
TDR150B2	15⅝	26⅝	20	3	Steel	—	FL	Knob	W	12,400*	4.62	9,700†	325	50	—	R-22	—
TD200B2	17⅜	26⅝	29⅝	3	Steel	—	FL	Knob	W	14,800*	5.5	—	380	60	—	R-22	—
TD250B2	17⅜	26⅝	29⅝	3	Steel	—	FL	Knob	W	17,600*	6.54	—	425	60	—	R-22	—
TI110B1	15⅝	26⅝	20	3	Steel	—	F	Knob	W	10,500*	3.9	—	300	50	35	R-22	—
TI110B2	15⅝	26⅝	20	3	Steel	—	F	Knob	W	10,200*	3.79	—	300	50	35	R-22	—
TI120B2	15⅝	26⅝	20	3	Steel	—	F	Knob	W	11,500*	4.25	—	300	50	35	R-22	—
TI150B1	15⅝	26⅝	20	3	Steel	—	F	Knob	W	11,100*	4.1	—	325	50	35	R-22	—
TI150B2	15⅝	26⅝	20	3	Steel	—	F	Knob	W	12,500*	4.9	—	325	50	35	R-22	—
TI200B2, B8	17⅜	26⅝	29⅝	3	Steel	—	F	Knob	W	16,700*	6.2	—	380	60	40	R-22	—
TIR200B2	17⅜	26⅝	29⅝	3	Steel	—	F	Knob	W	16,700*	6.2	12,200†	380	60	40	R-22	—
T1250B2, B8	17⅜	26⅝	29⅝	3	Steel	—	F	Knob	W	19,100*	7.0	—	425	60	40	R-22	—
TIR250B2	17⅜	26⅝	29⅝	3	Steel	—	F	Knob	W	19,100*	7.0	14,000†	425	60	40	R-22	—

‡F—front, R—right, L—left, †W—window, P—portable, *Rated under NEMA standard, †At 40° F. outdoor temperature. †TD150B8—$333.95, T1200B8—$402.95, T125B8—$441.95.

Model No.	Compressor Make	Compressor Hp.	Compressor Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Heating Watts	Fan Motor B.p.m.	Fan Motor Hp.	Air Filter Type	Air Filter Dimensions	Coils (Rows) Evap.	Coils (Rows) Cond.	Net Weight	List Price
Thomas A. Edison—McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																		
TP50B17	Tecumseh	½	AR-36	115	7.5	—	730	85	—	—	1550	1/25	D	7⅛x15⅝	3	3	65	$186.95
TD100B17	Tecumseh	1	AU-14	115	7.5	—	920	97	—	—	1550/1300	1/10	D	10⅛x22¼	3	3	96	257.95
TD100B1, B2	Tecumseh	1	AU-1612	115/230	12/7.5	—	1260	97	—	—	1550/1300	1/10	D	10⅛x22¼	3	3	96	257.95
TD110B8	Tecumseh	1	B1616	208	6.0	—	1560	87	—	—	1000	1/10	D	9⅝x19⅝	3	3	190	—
TDR110B2 *	Tecumseh	1	—	230	8.0	—	—	87	—	—	1000	1/10	D	9⅝x19⅝	3	3	190	332.95
TD150B2, B8	Tecumseh	1½	B32P16	230/208	10.0	—	2050	93	—	—	1000	1/10	D	9⅝x19⅝	3	3	195	327.95‡
TDR150B2	Tecumseh	1½	—	230	10.0	—	—	93	—	—	1000	1/10	D	9⅝x19⅝	3	3	195	365.95
TD200B2	Tecumseh	2	B74T16	230	11.0	—	1960	92	—	—	1000	1/7	D	11⅝x19⅝	3	3	225	354.95
TD250B2	Tecumseh	2½	B21U18	230	12.0	—	2600	92	—	—	1000	1/7	D	11⅝x19⅝	4	4	235	402.95
TI110B1	Tecumseh	1	B1613	115	12.0	—	1350	98	—	—	1050/900	1/9	D	9⅝x19⅝	3	3	190	309.95
TI110B2	Tecumseh	1	B1616	230	8.0	—	1500	87	—	—	1050/900	1/9	D	9⅝x19⅝	3	3	195	319.95
TI120B2	Tecumseh	1	B1616	230	8.0	—	1650	90	—	—	1050/900	1/9	D	9⅝x19⅝	3	3	190	326.95
TI150B1	Tecumseh	1½	B32B16	115	12.0	—	1420	99	—	—	1050/900	1/9	D	9⅝x19⅝	3	3	195	362.95
TI150B2	Tecumseh	1½	B32P16	230	10.0	—	2070	95	—	—	1050/900	1/9	D	9⅝x19⅝	3	3	195	344.95
TI200B2, B8	Tecumseh	2	B74T16	230/208	11.0	—	2220	99	—	—	1050/900	1/6	D	11⅝x19⅝	3	3	220	385.95‡
TIR200B2	Tecumseh	2	—	230	11.0	—	—	99	—	—	1050/900	1/6	D	11⅝x19⅝	3	3	220	434.95
T1250B2, B8	Tecumseh	2½	B21U18	230/208	12.0	—	2640	92	—	—	1050/900	1/6	D	11⅝x19⅝	4	4	240	434.95‡
TIR250B2	Tecumseh	2½	—	230	12.0	—	—	92	—	—	1050/900	1/6	D	11⅝x19⅝	4	4	240	473.95

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Controls Type	Application‡	Capacities Cooling (B.t.u.h.)	Capacities Dehum. (Pts./Hr.)	Capacities Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Air Capacities (C.f.m.) Fresh	Air Capacities (C.f.m.) Exhaust	Refrigerant No. (11, 22)	Refrigerant Charge (Oz.)
Welbilt—Welbilt Corp., Maspeth 78, L. I., N. Y.																	
9WD2	10½	14⅛	20½	6	Steel & P.	No	T	Toggle	W C	6,600*	1.8	—	180	—	—	R-22	—
9WF2	14⅛	22⅞	16½	2½	Steel & P.	No	FR	Knob & PB	W T	6,600*	1.6	—	180	75	—	R-22	—
9WK3	14⅛	22⅞	16½	2¼	Steel & P.	No	FR	Knob & PB	W T	7,400*	2.2	—	200	85	—	R-22	—
9WP2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	8,800*	2.5	—	300	100	150	R-22	—
9WT2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	11,500*	3.5	—	320	100	150	R-22	—
9WQ2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	8,800*	2.5	—	300	100	150	R-22	—
9WN2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	8,800*	2.5	—	300	100	150	R-22	—
9WS2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	11,000*	3.0	—	300	100	150	R-22	—
9WW2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	13,000*	4.0	—	320	110	150	R-22	—
9WY2	19⅝	27	17½	14	Steel	No	FC	Knob & PB	W T	15,000*	4.5	—	350	125	150	R-22	—

‡F—front, R—right, C—center, †W—normal window, C—casement, T—thru-wall. *Rated under ARI standard.

Model No.	Compressor Make	Compressor Hp.	Compressor Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Heating Watts	Fan Motor B.p.m.	Fan Motor Hp.	Air Filter Type	Air Filter Dimensions	Coils (Rows) Evap.	Coils (Rows) Cond.	Net Weight	List Price
Welbilt—Welbilt Corp., Maspeth 78, L. I., N. Y.																		
9WD2	Tecumseh	1	—	115	7.5	—	850	98	—	—	1500	—	P	10 x12	3	3	78	$179.95
9WF2	Tecumseh	1	—	115	7.5	—	850	98	—	—	1525	—	P	8½x11½	4	3	110	189.95
9WK3	Tecumseh	1	—	230	7.5	—	1350	87	—	—	1525	—	P	8½x19⅝	4	3	110	199.95
9WP2	Tecumseh	1	—	115	12.0	—	1350	96	—	—	1100	—	P	8½x19⅝	3	1	130	209.95
9WT2	Tecumseh	1½	—	115	12.0	—	1350	98	—	—	1100	—	P	8½x19⅝	3	2	160	209.95
9WQ2	Tecumseh	1	—	115	7.5	—	850	98	—	—	1100	—	P	8½x19⅝	3	2	160	249.95
9WN2	Tecumseh	1	—	230	7.5	—	1350	87	—	—	1100	—	P	8½x19⅝	3	1	180	209.95
9WS2	Tecumseh	1	—	230	9.0	—	1500	87	—	—	1100	—	P	8½x19⅝	3	1	130	219.95
9WW2	Tecumseh	1½	—	230	12.0	—	2100	87	—	—	1100	—	P	8½x19⅝	3	2	160	279.95
9WY2	Tecumseh	2	—	230	12.0	—	2600	87	—	—	1100	—	P	8½x19⅝	3	2	165	289.95

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Controls Type	Application‡	Capacities Cooling (B.t.u.h.)	Capacities Dehum. (Pts./Hr.)	Capacities Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Air Capacities (C.f.m.) Fresh	Air Capacities (C.f.m.) Exhaust	Refrigerant No. (11, 22)	Refrigerant Charge (Oz.)
Wizard—Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.																	
6JC1910	12½	17½	15¾	4	Steel	No	F	Knob	P	3,600†	.9	—	140	—	—	R-12	—
6JC1921-32	15⅛	23⅝	18¾	3	Steel	No	F	Knob	W	7,000†	1.9	—	275	—	—	R-22	—
6JC1934	15⅛	23⅝	18¾	3	Steel	No	F	Knob	W	8,000†	2.0	—	275	45	60	R-22	—
6JC1963	17⅞	23⅝	24	3	Steel	No	F	Knob	W	12,000†	3.5	—	350	—	—	R-22	—
6JC1962	17⅞	23⅝	24	3	Steel	No	F	Knob	W	14,000†	4.0	—	400	—	—	R-22	—
6JC1954	17⅞	23⅝	24	3	Steel	No	F	Knob	W	16,000†	4.7	—	400	90	120	R-22	—

‡F—front, †W—normal window, P—portable, †Rated under ARI standard. Special Features: Portable 6JC1910 has standard and bucket kit available for use as "Spot Cooler" or dehumidifier.

Model No.	Compressor Make	Compressor Hp.	Compressor Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Heating Watts	Fan Motor B.p.m.	Fan Motor Hp.	Air Filter Type	Air Filter Dimensions	Coils (Rows) Evap.	Coils (Rows) Cond.	Net Weight	List Price
Wizard—Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.																		
6JC1910	Tecumseh	¼	AP-4111	115	7.0	—	640	88	—	—	1500	1/20	D	9 x14½	1	2	60	—
6JC1921-32	Tecumseh	1	AU-1612	115/230	13/7.5	45/20	1250/1200	95/90	—	—	1100	1/10	D	10½x16⅝	2	2	120	—
6JC1934	Tecumseh	1	AU-1612	115	13.0	45	1250	95	—	—	1100	1/10	D	10½x16⅝	2	2	120	—
6JC1963	Tecumseh	1½	B32P16	230	12.0	40.5	2100	90	—	—	1100	1/10	D	10½x16⅝	3	3	185	—
6JC1962	Tecumseh	2	B74T16	230	12.0	50	2700	88	—	—	1550	1/4	D	10½x16⅝	4	4	200	—
6JC1954	Tecumseh	2	B74T16	230	12.0	50	2700	88	—	—	1550	1/4	D	10½x16⅝	4	4	200	—

All models except Portable have thermostat and concealed, adjustable full-circle air grilles.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Location‡	Controls Type	Application‡	Capacities Cooling (B.t.u.h.)	Capacities Dehum. (Pts./Hr.)	Capacities Heating (B.t.u.h.)	Air Capacities (C.f.m.) Circ.	Air Capacities (C.f.m.) Fresh	Air Capacities (C.f.m.) Exhaust	Refrigerant No. (11, 22)	Refrigerant Charge (Oz.)
York—York Div., Borg-Warner Corp., Grantley Rd., York, Pa.																	
GA, GAR-2	14	22	15½	3	Steel	No	TF	Knob	W T	—	2.07	—	140	—	40	R-22	—
GA-11	14	22	15½	3	Steel	No	TF	Knob	W T	—	2.07	—	140	—	40	R-22	—
GB-3	14⅞	24½	18½	—	Steel	No	LF	Knob	W T	—	2.2	—	245	85	80	R-22	—
GB, GBR-11	14⅞	24½	18½	—	Steel	No	LF	Knob	W T	—	3.0	—	245/260	85	80	R-22	—
GB-19	14⅞	24½	18½	—	Steel	No	LF	Knob	W T	—	3.0	—	245	85	80	R-22	—
GL-11	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	1.8	—	350	100	90	R-22	—
GL-19	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	1.8	—	350	100	90	R-22	—
GN-2	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	2.92	—	430	120	105	R-22	—
GN, R, HR-11	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	3.0	—	430	120	105	R-22	—
GN-19	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	3.0	—	430	120	105	R-22	—
GT, GTR-11	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	3.6, 3.4	—	450	130	110	R-22	—
GT-19	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	3.6	—	450	130	110	R-22	—
GT-11	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	5.05	—	450	150	110	R-22	—
GY-19	18	26⅝	25½	—	Steel	No	RF	Knob	W T	—	5.05	—	450	150	110	R-22	—

‡F—front, T—top, R—right, L—left, †W—normal window, T—thru-wall, †On R models only, ‡on GNHR model only.

Model No.	Compressor Make	Compressor Hp.	Compressor Mfrs. No.	Electrical Characteristics Volts	Amps.	Inrush	Watts	Power Factor (%)	Heating Type	Heating Watts	Fan Motor B.p.m.	Fan Motor Hp.	Air Filter Type	Air Filter Dimensions	Coils (Rows) Evap.	Coils (Rows) Cond.	Net Weight	List Price
York—York Div., Borg-Warner Corp., Grantley Rd., York, Pa.																		
GA, GAR-2	York	—	E2248SP	115	7.5	32.0	870	95	Rev. C.†	—	1050/950	—	P	8¼x21¾	3	3	90	—
GA-11	York	—	E2248	230	8.0	34.0	1100	95	—	—	1050/950	—	P	9¼x21¾	3	3	90	—
GB-3	York	—	E2440P	115	12.0	32.0	1320	95	—	—	1050/950	—	P	9¼x19	2	4	125	—
GB, GBR-11	York	—	E2448P	230	8.2	34.0	1400	91	Rev. C.†	—	1050/950	—	P	9¼x19	3	4	125	—
GB-19	York	—	E2448P	208	8.6	34.0	1400	90	—	—	1050/950	—	P	9¼x19	3	4	125	—
GL-11	York	—	E2448P	230	6.8	34.0	1440	91.5	—	—	850/725	—	P	12 x18½	3	3	158	—
GL-19	York	—	E2448P	208	7.2	34.0	1440	90	—	—	850/725	—	P	12 x18½	3	3	158	—
GN-2	York	—	E2448P	115	12.0	40.0	1520	95	—	—	925/825	—	P	12 x18½	3	4	158	—
GN, R, HR-11	York	—	E2548P	230	7.8	36.0	1760	95	R.C.† & E.‡	—	925/825	—	P	12 x18½	3	4	168	—
GN-19	York	—	E2548P	208	7.8	36.0	1760	95	—	—	925/825	—	P	12 x18½	3	4	168	—
GT, GTR-11	York	—	F2644P	230	10.8	35.0	2070	85	Rev. C.	—	1050/950	—	P	12 x18½	3	4	193	—
GT-19	York	—	F2648P	208	11.5	33.0	2070	85	—	—	1050/950	—	P	12 x18½	3	4	193	—
GT-11	York	—	G2756P	230	15.0	45.0	2720	85	—	—	1050/950	—	P	12 x18½	4	4	195	—
GY-19	York	—	G2756P	208	16.6	48.0	2720	85	—	—	1050/950	—	P	12 x18½	4	4	195	—

Split Systems—Residential & Commercial

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Condenser Face Area (Sq. Ft.)	Condenser Rows Deep	Air Discharge C.f.m.	Air Discharge	Compressor No.	Compressor Make	Compressor Hp.	Compressor Mfrs. No.	Motor Phase	Motor Volts	Fan Motor Hp.	Kw. Input	Net Weight
ACI—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.																	
SCA-20	26½	31	36	19,700	8	2	2250	Side	1	Tecumseh	2	—	1—3	220/230	⅓	—	278
SCA-30	26½	31	36	29,600	8	3	2950	Side	1	Tecumseh	3	—	1—3	220/230	½	—	423
SCA-50	33	42	50	52,000	8	3	5100	Side	1	Tecumseh	5	—	1—3	220/230	½	—	594
AFCO Comfortmaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																	
2A1	23⅝	36⅞	27⅞	22,000	4.2	2	2000	Top	1	Tecumseh	2	B21U18	1	230	1/10	2.55	247
3A	26⅝	32½	33½	35,000	7.5	3	3200	Top	1	Tecumseh	3	PJE300	1	230	⅓	3.83	255
3A-3	26⅝	32½	32½	35,000	7.5	3	3200	Top	1	Tecumseh	3	PJE300	3	208/230	⅓	3.97	339
4A	29⅝	32½	32½	47,500	10.3	3	3500	Top	1	Tecumseh	4	PFB400	1	230	½	5.22	462
4A-3	29⅝	32½	32½	47,500	10.3	3	3500	Top	1	Tecumseh	4	PFB400	3	208/230	½	5.12	475
5A	35⅝	37	37	62,000	10	3	4400	Top	1	Tecumseh	5	PFB500	1	230	450 W.	6.6	553
5A-3	35⅝	37	37	62,000	10	3	4400	Top	1	Tecumseh	5	PFB500	3	208/230	450 W.	6.54	536
85A	40	41¾	41¾	85,000	11.25	4	6700	Top	2	Tecumseh	5, 2	PFB500, JB200	1	230	½	10.57	776
85A-3	40	41¾	41¾	85,000	11.25	4	6700	Top	2	Tecumseh	5, 2	PFB500, JE300	3	208/230	½	9.82	800
120A	33⅝	37	37	124,000	20	3	8800	Top	2	Tecumseh	5	PFB500	1	230	(2) 450 W.	13.2	1135
120A-3	33⅝	37	37	124,000	20	3	8800	Top	2	Tecumseh	5	PFB500	3	208/230	(2) 450 W.	13.08	1101
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																	
1202-2	23⅞	32⅝	37½	—	4.43	3	1600	Side	1	Tecumseh	2	B21T18	1	230	⅓	2.29	317
1203-3	23⅞	32⅝	37½	—	5.62	3	2250	Side	1	Airtemp	3	3003-3	1—3	230/208/220/440	½	4.32	400
1203-4	26⅛	32½	37⅞	—	7.7	3	2770	Top	1	Airtemp	3	3003-3	1—3	230/208/220	½	4.1	282
1206-00	38½	42	65	—	14.7	3	5000	Top	1	Airtemp	5	3005-2	1—3	230/208/220/440	½	6.6	845
1208	62	56	28	—	13.9	4	6000	Side	1	Airtemp	7½	3008-1	3	208/220/440	1	9.1	1150
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amana—Amana Refrigeration, Inc., Amana, Iowa																	
HR234-1	21	30	31	24,000	2.64	4	1300	Back	1	Tecumseh	2	B21U18	1	230	⅓	3.23	250
HR336-1	25	34	32	36,000	3.58	5	1920	Back	1	Tecumseh	3	PJE300	1	230	½	4.95	360
HR448-1	31	40	44	48,000	5.00	5	2800	Back	1	Tecumseh	4	PFB400	1	230	(2) ½	6.10	470
HR560-1	31	40	47	60,000	6.25	5	3550	Back	1	Tecumseh	5	PFB500	1	230	(2) ½	8.20	510
American-Standard—American-Standard Air Conditioning Div., 40 W. 40th St., New York 18, N. Y.																	
AC-2B	23⅞	30¼	27¾	21,600	3.6	2	1750	Side	1	Tecumseh	2	B21T18	1	230	⅓	3.0	205
AC-3B	23⅞	30¼	27¾	32,800	3.6	3	1700	Side	1	Tecumseh	3	PJE300	1—3	230/208/220	½	4.42	280
AC-4B	29⅞	48⅝	31⅞	48,500	7.8	2	4000	Side	1	Tecumseh	4	PFB400	1—3	230/208/220	(2) ½	5.8	445
AC-5B	38⅞	48⅝	31⅞	58,500	7.8	3	4000	Side	1	Tecumseh	5	FB500	1—3	230/208/220	(2) ½	7.15	455
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
APCo—Addison Products Co., Addison, Mich.																	
24AC	23⅝	30¼	22⅞	24,000	2.7	2	1750	Side	1	Tecumseh	2	B21U18	1	230	⅓	2.98	205
35AC	23⅝	30¼	22⅞	35,000	3.7	3	1700	Side	1	Tecumseh	3	JE300	1—3	208/220/230	½	4.5	260
47AC	28⅝	48⅝	31⅞	48,000	7.8	3	4000	Side	1	Tecumseh	4	PFB400	1—3	208/230/230	(2) ½	6.08	445
60AC	28⅝	48⅝	31⅞	61,000	7.8	3	4000	Side	1	Tecumseh	5	FB500	1—3	208/220/230	(2) ½	7.36	455

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Refrigerant Control	Refrigerant Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Coil Rows Deep	Blower C.f.m.	Blower R.p.m.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight
ACI—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.																	
ACI-VR-2	—	—	—	—	—	—	—	—	2.08	3	1000	—	—	—	—	—	55
ACI-VR-3	—	—	—	—	—	—	—	—	2.85	3	1800	—	—	—	—	—	60
ACI-VR-5	—	—	—	—	—	—	—	—	4.36	3	2200	—	—	—	—	—	100
AFCO Comfortmaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																	
2A1	15*	14⅞	16	22,000	R-22	Cap.	—	Temp.	2.3	3	800	—	—	—	—	—	—
3A	15*	21⅝	16	35,000	R-22	Cap.	—	Temp.	3.61	3	1200	—	—	—	—	—	—
3A-3	15*	21⅝	16	35,000	R-22	Cap.	—	Temp.	3.61	3	1200	—	—	—	—	—	—
4A	15*	25	16	47,500	R-22	Cap.	—	Temp.	4.5	3	1600	—	—	—	—	—	—
4A-3	15*	25	16	47,500	R-22	Cap.	—	Temp.	4.5	3	1600	—	—	—	—	—	—
5A	15*	30⅝	16	62,000	R-22	Cap.	—	Temp.	5.2	3	2000	—	—	—	—	—	—
5A-3	15*	30⅝	16	62,000	R-22	Cap.	—	Temp.	5.2	3	2000	—	—	—	—	—	—
85A	15*	30⅝/45	16/32⅝	85,000	R-22	Cap.	—	Temp.	7.56	3	3000	—	—	—	—	—	—
85A-3	15*	30⅝/45	16/32⅝	85,000	R-22	Cap.	—	Temp.	7.56	3	3000	—	—	—	—	—	—
120A	15*	30⅝/60⅜	16/32⅝	124,000	R-22	Cap.	—	Temp.	10.4	3	4000	—	—	—	—	—	—
120A-3	15*	30⅝/60⅜	16/32⅝	124,000	R-22	Cap.	—	Temp.	10.4	3	4000	—	—	—	—	—	—

*Specifications for upflow "V" coils.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Refrigerant Control	Refrigerant Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Coil Rows Deep	Blower C.f.m.	Blower R.p.m.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight
**

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Armstrong—Armstrong Furnace Co., 851 W. Third Ave., Columbus, Ohio																	
42-21	25½	20	27	22,000	3.66	3	1500	Side	1	Tecumseh	2	B21T18	1	230	¼	2.44	205*
42-31	28	24¾	33½	35,000	5.5	3	2600	Side	1	Tecumseh	3	JE300	1	230	¼	2.65	301*
42-51-3	28	55⅝	24½	58,000	8.35	3	2400	Side	1	Tecumseh	5	FB500	1—3	230/208/220	(2) ¼	6.1	566*
*Approximate shipping weight.																	
Bard—Bard Mfg. Co., Bryan, Ohio																	
24AC	24	30	28	24,000	3.65	3	1700	Side	1	Tecumseh	2	B21U18	1	230	⅓	2.98	205
35AC	24	30	28	35,000	3.65	3	1700	Side	1	Tecumseh	3	JE300	1	230	⅓	4.5	260
47AC	29	49	32	48,000	7.65	3	4000	Side	1	Tecumseh	4	PFB400	1	230	(2) ⅓	6.06	445
60AC	29	49	32	61,000	7.65	3	4000	Side	1	Tecumseh	5	FB500	1—3	230/208/220	(2) ⅓	7.36	455
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Barkow Weatherwise—Aug. G. Barkow Mfg. Co., 2230 S. 43rd St., Milwaukee 46, Wis.																	
RO3-A	23½	29½	33⅛	38,400	3.33	5	2400	Side	1	Tecumseh	3	JE300	1—3	230/220/208	½	...	310
RO5-A	27½	36½	56	59,500	7.33	3	4800	Side	1	Tecumseh	5	FB500	1—3	230/220/208	¾	...	600
Bonair—Peerless Products Co., 23rd St. & Sedgley Ave., Philadelphia 32, Pa.																	
24AC	24	30	28	24,000	...	...	1750	Side	1	Tecumseh	...	...	1	...	⅓	...	210
35AC	24	30	28	35,000	...	...	1700	Side	1	Tecumseh	...	...	1—3	...	⅓	...	265
47AC	29	49	32	48,000	...	...	4000	Side	1	Tecumseh	...	...	1—3	...	(2) ⅓	...	450
60AC	29	49	32	61,000	...	...	4000	Side	1	Tecumseh	...	...	1—3	...	(2) ⅓	...	460
Brown—A. Brown Products Corp., 1090 Springfield Rd., Union, N. J.																	
24AC	23⅝	30¼	27⅞	24,000	...	...	1750	Side	...	Tecumseh	...	...	1	230	(1) ⅓	2.98	205
35AC	23⅝	30¼	27⅞	35,000	...	...	1700	Side	...	Tecumseh	...	...	1—3	230	(1) ⅓	4.5	260
47AC	28⅝	48⅝	31⅞	48,000	...	...	4000	Side	...	Tecumseh	...	...	1—3	230	(2) ⅓	6.06	445
60AC	28⅝	48⅝	31⅞	61,000	...	...	4000	Side	...	Tecumseh	...	...	1—3	230	(2) ⅓	7.36	455
Bryant—Bryant Mfg. Co., 2020 Montcalm St., Indianapolis, Ind.																	
20-560	20¼	30½	35⅛	21,000*	...	...	1800	Side	1	....	2	....	1—3	230/208/220	....	18.0	400†
30-560	20¼	30½	35⅛	32,200*	...	...	1700	Side	1	....	3	....	1—3	230/208/220	....	18.0	440†
40-560	25¼	36⅝	45⅝	42,000*	...	...	2600	Side	1	....	5	....	1—3	230/208/220	....	18.0	560†
50-560	25¼	36⅝	45⅝	54,000*	...	...	2475	Side	1	....	5	....	1—3	230/208/220	....	25.0	600†
60-560	26¾	36⅝	47⅛	63,000*	...	...	3900	Side	1	....	...	....	3	208/220	....	38.8	596†
*Based on ASRE rating conditions 95°/75° inlet air to condenser, 80°/67° air to evaporator. †Approximate shipping weight.																	
Capitolaire—National-U. S. Radiator Corp., 944 Ash St., Johnstown, Pa.																	
RES-1AR-02	28⅝	34	36	21,000	8.34	2	2500	Side	1	Tecumseh	2	....	1	230	⅓	....	225
RES-1AR-03	28⅝	34	36	33,000	8.34	3	3000	Side	1	Tecumseh	3	JE300	1—3	230/208/220	½	....	250
RES-1AR-05	34½	40	49	56,000	16.70	3	4700	Side	1	Tecumseh	5	FB500	1—3	230/208/220	¾	....	350
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Century—Century Engineering Corp., 401 Third St., S.E., Cedar Rapids, Iowa																	
WD-3	25⅝	28	25	19,500	...	...	...	...	1	Tecumseh	2	...	1	230	1/10	...	285
2A-1X	36⅝	44½	33	22,500	...	...	...	...	1	Tecumseh	2	...	1—3	230	(2) 1/10	...	445
AB-2	28½	30	33	23,500	...	...	...	...	1	Tecumseh	2	...	1—3	230	¼	...	400
AB-3	28½	36	33	36,000	...	...	...	...	1	Tecumseh	3	...	1—3	230	⅓	...	500
AB-4	35	36	36	48,000	...	...	...	...	1	Tecumseh	4	...	1—3	230	½	...	575
AB-5	35	42	42	60,000	...	...	...	...	1	Tecumseh	5	...	1—3	230	¾	...	690
W3-1X	31½	21½	21½	28,000	...	...	...	...	1	Tecumseh	3	...	1—3	230	...	...	225
W3-1X	31½	21½	21½	42,000	...	...	...	...	1	Tecumseh	3	...	1—3	230	...	...	240
Clima-Twin-Aire—Peerless Corp., 1853 Ludlow Ave., Indianapolis 7, Ind.																	
RA-213	31½	34½	34½	32,000	7.5	2	1600	Top	1	Tecumseh	2	B21T18	1	230	1/12	2.0	280
RA-243	31½	34½	34½	34,000	7.5	2	2000	Top	1	Tecumseh	2	B21T18	1	230	1/12	2.1	310
RA-253	31½	34½	34½	36,500	7.5	2	2000	Top	1	Tecumseh	2	JB-200	1	230	1/12	2.4	335
RA-373	31½	37½	37½	36,000	7.5	3	2800	Top	1	Tecumseh	3	JE-300	1—3	230/208/220	.125	4.1	370
RA-374	31½	37½	37½	37,000	7.5	3	2800	Top	1	B-W	3	YH-430	1	230	.125	4.0	370
RA-464	31½	37½	37½	46,000	7.5	3	3800	Top	2	Tecumseh	3 (2)	B21T18	1	230	.4	4.9	440
RA-474	31½	37½	37½	48,000	7.5	3	3800	Top	2	B-W	3 (2)	H-490	1	230	.4	4.9	440
RA-594	31½	37½	37½	61,800	11.3	3	4300	Top	1	Tecumseh	5	PFB-500	1—3	230/208/220	.4	6.2	530
Clima-Twin—Round Oak Co. Inc. of Indiana, Dowagiac, Mich.																	
RA-213	31½	34½	34½	32,000	7.5	2	1600	Top	1	Tecumseh	2	B21T18	1	230	1/12	2.0	280
RA-243	31½	34½	34½	34,000	7.5	2	2000	Top	1	Tecumseh	2	B21T18	1	230	1/12	2.1	310
RA-253	31½	34½	34½	36,500	7.5	2	2000	Top	1	Tecumseh	2	JB-200	1	230	1/12	2.4	335
RA-373	31½	37½	37½	36,000	7.5	3	2800	Top	1	Tecumseh	3	JE-300	1—3	230/208/220	.125	4.1	370
RA-374	31½	37½	37½	37,000	7.5	3	2800	Top	1	B-W	3	YH-430	1	230	.125	4.0	370
RA-464	31½	37½	37½	46,000	7.5	3	3800	Top	2	Tecumseh	3 (2)	B21T18	1	230	.4	4.9	440
RA-474	31½	37½	37½	48,000	7.5	3	3800	Top	2	B-W	3 (2)	H-490	1	230	.4	4.9	440
RA-594	31½	37½	37½	61,800	11.3	3	4300	Top	1	Tecumseh	5	PFB-500	1—3	230/208/220	.4	6.2	530
Coleman—The Coleman Co., 250 N. St. Francis St., Wichita 1, Kan.																	
6219A701	34	30½	26⅞	23,000	4.1	3	1850	Top	1	B-W	2	H490TA-2	1	230	⅓	2.5	270
6220A	34	40½	26⅞	35,500	6.0	3	2700	Top	1	Tecumseh	3	JE300	1—3	230	⅓	3.9-3.86	340
6221	33⅞	44⅞	34	49,000	7.63	3	3700	Side	1	Tecumseh	4	PFB400	1—3	230	½	5.85-4.82	555
6222	33⅞	44⅞	34	61,100	9.38	3	4600	Side	1	Tecuhseh	5	PFB500	1—3	230	½	7.3-6.7	580
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Columbia—Columbia Specialty Co., Inc., 4925 Bradley Blvd., Chevy Chase 15, Md.																	
2 CU	20	30	46	24,000	...	...	...	...	1	Tecumseh	2	JB200	1—3	230/208/220	....	...	280
3 CU	25	36	46	36,000	...	...	...	...	1	Tecumseh	3	JE300	1—3	230/208/220	....	...	450
5 CU	50	36	52	60,000	...	...	...	...	1	Tecumseh	5	FB500	1—3	230/208/220	....	...	700
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																	
HCC-261	23⅝	30½	27½	24,000	3.7	2	1750	Side	1	Tecumseh	2	B21U18	1	230	⅓	2.98	205
HCC-351	23⅝	30½	27½	35,000	3.7	3	1700	Side	1	Tecumseh	3	JE300	1—3	230	⅓	4.5	260
HCC-471	28⅝	48½	31⅝	48,000	7.8	3	4000	Side	1	Tecumseh	4	PFB400	1—3	230	(2) ⅓	6.1	445
HCC-611	28⅝	66½	31⅝	61,000	7.8	3	4000	Side	1	Tecumseh	5	FB500	1—3	230	(3) ⅓	7.36	455
Comfortemp—Comfort Products, Inc., 440 Hillburn Dr., P. O. Box 8568, Dallas 16, Texas																	
502A	26	31	76	60,000	12.86	4	8250	Side	1	Tecumseh	...	VFT	...	...	...	...	500
752A	26	34	80	90,000	18.75	4	12400	Side	1	Tecumseh	...	VFT	...	...	...	...	1000
301W	26	26	72	30,000	Water-cooled		2300	Side	1	Copeland	...	4A1	...	...	...	...	945
501W	26	26	72	61,000	Water-cooled		3900	Side	1	Copeland	...	4A1	...	...	...	...	970
NOTE: All the above equipment is engine driven, using natural gas for fuel. Models are available for operation on L.P. fuels on order from the factory. All models are fully automatic and cycle upon the demands of the thermostat. Water-cooled condenser, serpentine coiled with finger spray wheel for evaporative cooling, is own make.																	
Coolerator—Coolerator Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																	
R3A-21, 23	30⅝	31¼	37½	35,200	4	4	2000	Side	...	Tecumseh	3	JE300	1—3	230/208/220	⅓	4.1	340
R4A-21, 23	42¼	24	24	47,200	6.25	3	3000	Top	...	Tecumseh	4	PFB400	1—3	230/208/220	½	5.6	352
R5A-21, 23	43¼	36½	36½	57,300	7.75	3*	4000	Top	...	Tecumseh	5	FB500	1—3	230/208/220	⅓	6.95	496
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*Twin Coils.																	

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Refrigerant Control	Refrigerant Charge (Lbs.)	Refrigerant Control	Coil Face Area (Sq. Ft.)	Coil Rows Deep	Blower C.f.m.	Blower E.p.m.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight
Armstrong—Armstrong Furnace Co., 851 W. Third Ave., Columbus, Ohio																	
42-R3-2	16½	21½	21¼	22,300	R-22	X Valve	5.5	Temp.	3.6	2	800	...	...	...	...	...	44*
42-R3-3	16½	21½	21¼	35,100	R-22	X Valve	11	Temp.	5.31	3	1300	...	...	...	...	...	56*
42-R3-5	24½	26½	27¼	58,000	R-22	X Valve	17	Temp.	7.34	3	2000	...	...	...	...	...	116*
Bard—Bard Mfg. Co., Bryan, Ohio																	
3D19	16¼	21⅝	23¾	24,000	R-22	X Valve	...	Temp.	2.72	3	8-1200	...	...	...	...	...	90
D-CF33P	13½	27½	29¾	34-35,000	R-22	X Valve	...	Temp.	3.75	3	8-1200	...	...	...	...	...	95
H-HC42	23½	24	30	24,000	R-22	X Valve	...	Temp.	3.75	3	8-1200	...	...	...	...	...	95
5D23	16¼	34⅝	24⅝	35,000	R-22	X Valve	...	Temp.	2.72	3	8-1200	...	...	...	...	...	95
H-HC43	23½	24	30	35,000	R-22	X Valve	...	Temp.	3.75	3	8-1200	...	...	...	...	...	95
5D24	19	27	31	48-61,000	R-22	X Valve	...	Temp.	5.00	3	16-2000	...	...	...	...	...	99
D-CF36P	15½	33	40	48-61,000	R-22	X Valve	...	Temp.	5.4	4	16-2000	...	...	...	...	...	110
H-HC45	21⅛	37⅝	36½	48-61,000	R-22	X Valve	...	Temp.	5.4	4	16-3000	...	...	...	...	...	97
Barkow Weatherwise—Aug. G. Barkow Mfg. Co., 2230 S. 43rd St., Milwaukee 46, Wis.																	
HF3	24	25	29¼	....	R-22	X Valve	Holding	Temp.	2.66	4	1200	661	¼	1	P	16x26x1	150
HF5	24½	36½	46⅝	....	R-22	X Valve	Holding	Temp.	3.75	4	2100	490	¼	2	P	15x20x1	365
Bonair—Peerless Products Co., 23rd St. & Sedgley Ave., Philadelphia 32, Pa.																	
24AC	....	....	....	....	R-22	X Valve/Cap.	....	....	....	....	....	....	....	....	P or D	....	....
35AC	....	....	....	....	R-22	X Valve/Cap.	....	....	....	....	....	....	....	....	P or D	....	....
47AC	....	....	....	....	R-22	X Valve/Cap.	....	....	....	....	....	....	....	....	P or D	....	....
60AC	....	....	....	....	R-22	X Valve/Cap.	....	....	....	....	....	....	....	....	P or D	....	....
Brown—A. Brown Products Corp., 1090 Springfield Rd., Union, N. J.																	
H	....	....	....	....	R-22	Cap.	....	....	....	....	....	....	....	....	....	....	....
A	....	....	....	....	R-22	Cap.	....	....	....	....	....	....	....	....	....	....	....
UB	....	....	....	....	R-22	Cap.	....	....	....	....	....	....	....	....	....	....	....
EB	....	....	....	....	R-22	Cap.	....	....	....	....	....	....	....	....	....	....	....
Bryant—Bryant Mfg. Co., 2020 Montcalm St., Indianapolis, Ind.																	
20VB	24⅝	23¼	29½	....	R-12	X Valve	14	....	3.2	....	....	....	¼	....	....	....	....
30VB	24⅝	23¼	29½	....	C-7	X Valve	16	....	3.2	....	....	....	⅓	....	....	....	....
40VB	29⅝	28½	28⅝	....	R-12	X Valve	19.5	....	3.2	....	....	....	½	....	....	....	....
50VB	29⅝	28½	28⅝	....	C-7	X Valve	19	....	3.2	....	....	....	½	....	....	....	....
60VB	57¼	28⅝	28⅝	....	C-7	X Valve	21	....	3.16	....	....	....	½	....	....	....	....
Also available with Type A. S. H cooling coils.																	
Capitolaire—National-U. S. Radiator Corp., 944 Ash St., Johnstown, Pa.																	
FB-2	22½	29	29¾	24,000	R-22	X Valve	....	....	3.13	3	800	....	¼	1	D	20x20x1	150
FB-3	22½	29	29¾	36,000	R-22	X Valve	....	....	3.13	3	1200	....	⅓	1	D	20x20x1	150
FB-5	25	36	44¼	60,000	R-22	X Valve	....	....	5.22	3	2000	....	½	2	D	23½x16x1	250
F-2	22½	28½	8½	24,000	R-22	X Valve	....	....	3.13	3	800	....	....	....	....	....	45
F-3	22½	28½	8½	36,000	R-22	X Valve	....	....	3.13	3	1200	....	....	....	....	....	65
A-2	16½	21½	21½	24,000	R-22	X Valve	....	....	2.6	3	800	....	....	....	....	....	110
A-3	16½	21½	21½	36,000	R-22	X Valve	....	....	3.21	3	1200	....	....	....	....	....	115
Century—Century Engineering Corp., 401 Third St., S.E., Cedar Rapids, Iowa																	
2A-3	16	15	22	22,000	R-22	X Valve	....	Temp.	....	....	....	....	....	....	....	....	....
3A-3	16	20	22	36,000	R-22	X Valve	....	Temp.	....	....	....	....	....	....	....	....	....
4A-3	16	25	22	48,000	R-22	X Valve	....	Temp.	....	....	....	....	....	....	....	....	....
5A-3	16	32	22	60,000	R-22	X Valve	....	Temp.	....	....	....	....	....	....	....	....	....
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Clima-Twin-Aire—Peerless Corp., 1853 Ludlow Ave., Indianapolis 7, Ind.																	
RA213*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	¼	....	D	....	....
RA243*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	⅓	....	D	....	....
RA253*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	⅓	....	D	....	....
RA373*	....	....	....	....	R-22	Cap.	Holding	Temp.	3.2	3	1200	....	⅓	....	D	....	....
RA374*	....	....	....	....	R-22	Cap.	Holding	Temp.	3.2	3	1200	....	⅓	....	D	....	....
RA464*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	1600	....	⅓	....	D	....	....
RA474*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	1600	....	⅓	....	D	....	....
RA594*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	2000	....	⅓	....	D	....	....
*Condensing Unit Model No. Upflow, downflow, horizontal cabinets and air flow wrappers available with all models.																	
Clima-Twin—Round Oak Co. Inc. of Indiana, Dowagiac, Mich.																	
RA213*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	¼	....	D	....	....
RA243*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	⅓	....	D	....	....
RA253*	....	....	....	....	R-22	Cap.	Holding	Temp.	2.2	3	800	....	⅓	....	D	....	....
RA373*	....	....	....	....	R-22	Cap.	Holding	Temp.	3.2	3	1200	....	⅓	....	D	....	....
RA374*	....	....	....	....	R-22	Cap.	Holding	Temp.	3.2	3	1200	....	⅓	....	D	....	....
RA464*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	1600	....	⅓	....	D	....	....
RA474*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	1600	....	⅓	....	D	....	....
RA504*	....	....	....	....	R-22	Cap.	Holding	Temp.	4.6	3	2000	....	⅓	....	D	....	....
*Condensing Unit Model No. Upflow, downflow, horizontal cabinets and air flow wrappers available with all models.																	
Coleman—The Coleman Co., 250 N. St. Francis St., Wichita 1, Kan.																	
H-6432A	36	21⅝	9	24,000	R-22	X Valve	...	Temp.	2.5	3	800	...	...	...	...	...	...
H-6433A	36	29½	11	36,000	R-22	X Valve	...	Temp.	3.75	3	1200	...	...	...	...	...	...
H-6435A	36	41¼	13	60,000	R-22	X Valve	...	Temp.	5.63	3	2000	...	...	...	...	...	...
6442	21	20	21⅛	24,000	R-22	X Valve	...	Temp.	3.4	3	800	...	...	...	...	...	...
6443	21	25	21⅛	36,000	R-22	X Valve	...	Temp.	3.8	3	1200	...	...	...	...	...	...
6445	21	33	21⅛	60,000	R-22	X Valve	...	Temp.	5.6	3	2000	...	...	...	...	...	...
6532*	36	20	21⅛	....	....	....	....	....	....	....	800	....	¼	....	....	....	....
6532*	36	20	29¾	....	....	....	....	....	....	....	1200	....	⅓	....	....	....	....
6535*	36	36	41¾	....	....	....	....	....	....	....	2000	....	⅓	....	....	....	....
*Blower units used with horizontal coils.																	
Columbia—Columbia Specialty Co., Inc., 4925 Bradley Blvd., Chevy Chase 15, Md.																	
2 AB	60	20	30	....	R-22	....	8	Temp.	2.09	3	800	....	....	1	D	16x25	100
3 AB	60	24	36	....	R-22	....	10	Temp.	3.13	3	1200	....	....	1	D	20x25	150
5 AB	60	28	36	....	R-22	....	18	Temp.	6.26	3	2000	....	....	2	D	20x25	200
Duct coils, plenum coils, horizontal, and down-flow units available.																	
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																	
A-24	14	18⅝	22	24,000	R-22	Cap.	3½	Temp.	2.3	2	750†	....	....	....	....	....	62
A-36	18	22¾	22	36,000	R-22	Cap.	4½	Temp.	3.1	3	1100†	....	....	....	....	....	82
A-47	23	28⅝	22	48,000	R-22	Cap.	6%	Temp.	5.4	3	1400†	....	....	....	....	....	91
A-61	23	28⅝	22	61,000	R-22	Cap.	10	Temp.	5.4	3	2000†	....	....	....	....	....	91
†Required c.f.m.																	
Comfortemp—Comfort Products, Inc., 440 Hillburn Dr., P. O. Box 8568, Dallas 16, Texas																	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coolerator—Coolerator Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																	
RBE3A	23½	35½	26½	....	R-22	X Valve	Holding	Temp.	2.4	4	1170	1050	¼	1	D	16x20	112
RBE4A	25⅝	35⅝	33¼	....	R-22	X Valve	Holding	Temp.	4.2	3	1600	Adj.	⅓	2	D	16x20	190
RBE5A	25⅝	35⅝	33¼	....	R-22	X Valve	Holding	Temp.	4.2	3	2150	Adj.	½	2	D	16x20	300
RVE3A	12	19⅝	23½	....	R-22	X Valve	Holding	Temp.	3	4	1200	....	....	....	....	....	....
RVE4A	13⅝	23⅝	26½	....	R-22	X Valve	Holding	Temp.	4.1	4	1600	....	....	....	....	....	....
RVE5A	13⅝	21¼	33	....	R-22	X Valve	Holding	Temp.	5.5	5	2000	....	....	....	....	....	....
RHE3A	21⅝	35	12½	....	R-22	X Valve	Holding	Temp.	3.42	3	1200	....	....	....	....	....	....
RHE4A	26⅛	35¼	14½	....	R-22	X Valve	Holding	Temp.	4.8	3	1600	....	....	....	....	....	....
RHE5A	26⅛	35½	14½	....	R-22	X

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Curtis—Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 20, Mo.																	
AU060	29¾	29	26¾	34,300	4.75	4	2440	Side	1	Copeland	3	ERO-300	1—3	208/220/440/550	⅓	4.51	325
AU080	29¾	34½	44½	68,900	9.5	4	5270	Side	1	Copeland	5	LRG-500	1—3	208/220/440/550	½	9.54	470
AU090	37¼	34½	35⅝	84,300	14.2	4	6900	Side	1	Copeland	7½	9R8-1000	3	208/220/440/550	¾	11.27	670
Custom-Temp—Custom-Temp Corp., Liberty, N. Y.																	
(3 to 20 hp. available. Details not available at this time)																	

*All flat horizontal coils in Vertical cabinets. †Tons with 4-row coil. Rated tons with 80° d.b. 67° w.b. entering air, 40° coil. ‡Available with either high or low velocity filter sections. §Optional

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Day & Night—Day & Night Mfg. Co., La Puente, Calif.																	
240 AR	20	28¾	28½	23,000	4.60	4	1150	Side	1	B-W	2	CH490TA-2	1	230	¼	2.85	295
360 AR	22	34	38	34,000	5.53	4	1800	Side	1	Tecumseh	3	JE-300	1—3	230/208/220	⅓	4.15	340
480 AR	26	29	41	47,000	6.98	4	2400	Side	1	Tecumseh	4	PFB-400	1—3	230/208/220	½	5.20	395
ACR-4B	26⅝	32⅛	27½	31,000	4.94	3	2100	Side	1	Carrier	—	6D24	1—3	230/208/220	⅓	3.40	430
ACR-5B	26⅝	37⅛	48¼	42,000	6.72	3	3000	Side	1	Carrier	—	6D43	1—3	230/208/220	½	5.35	530
ACR-7B	26⅝	37⅛	48¼	52,000	7.83	3	3200	Side	1	Carrier	—	6D44	1—3	230/208/220	½	6.00	565
ACR-8B	37¼	36⅛	47½	63,000	9.65	3	4000	Side	1	Carrier	—	6D48	1—3	230/208/220	1	7.30	595
ACR-9B	26¼	33⅝	73⅛	76,000	13.07	3	5000	Side	1	Carrier	—	6D63	1—3	230/208/220	1	8.45	900
Delco—Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 6, N. Y.																	
DC-21SD	23⅝	30¾	27⅛	24,000	3.64	2	1750	Side	1	Tecumseh	2	B21U16	1	230	½	2.98	365
DC-31SD	23⅝	33¾	27⅛	35,000	3.64	3	1700	Side	1	Tecumseh	3	JE300	1—3	230/220/208	⅓	4.5	360
DC-41SD	29⅝	45⅝	31⅞	48,000	7.48	3	4000	Side	1	Tecumseh	4	PFB400	1—3	230/220/208	(2) ½	6.08	445
DC-51SD	39⅝	48⅝	31⅞	61,000	7.48	3	4000	Side	1	Tecumseh	5	FB500	1—3	230/220/208	(2) ½	7.36	455
Dunham-Bush—Dunham-Bush, Inc., 179 South St., West Hartford 10, Conn.																	
LRCU-10	67¼	75⅝	26	122,000	22.8	2	15000	Side	1	Brunnermetic	10	100HF	3	220	1	9.5	1250
LRCU-15	67⅜	94⅝	26	177,000	30.7	2	24000	Side	1	Brunnermetic	15	150HF	3	220	3	15.3	1500
LRCU-20	79⅛	38	36	244,000	53.4	2	25000	Side	2	Brunnermetic	10	100HF	3	220	3	19.7	2800
LRCU-25	80⅛	38	36	299,000	66.5	2	30000	Side	2	Brunnermetic	10-15	100HF, 150HF	3	220	3	24.0	3000
LRCU-30	80¼	38	39	356,000	66.5	3	40000	Side	2	Brunnermetic	15	150HF	3	220	5	29.8	3150
Fedders—Feddere Corp., 58-01 Grand Ave., Maspeth, N. Y.																	
660R-3/8	26⅝	31⅛	45⅝	60,000	7.8	3	—	Side	1	Tecumseh	5	—	1—3	230	⅓	—	465
636R-3/8	26⅝	27⅞	30½	37,000	4.6	3	—	Side	1	Tecumseh	3	—	1—3	230	⅓	—	395
630R-3/8	23⅝	27⅞	30⅛	32,000	3.6	3	—	Side	1	Tecumseh	3	—	1—3	230	⅓	—	375
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																	
CUAZ-220	26	29½	27⅝	21,000	4.1	2	1700	Side	1	Copeland	—	—	1	230	¼	2.6	300
CARW-300	26	44⅝	28¼	24,775	4.5	3	1850	Side	1	Frigidaire	—	—	3	208/220	⅓	3.4	416
CUAZ-320	26	29¼	27⅛	32,000	4.1	3	2450	Side	1	Tecumseh	—	—	1—3	208/220/230	⅓	4.0	255
CUAZ-380	27½	45⅛	28¼	39,000	6.5	3	2700	Side	1	Frigidaire	—	—	3	208/220	½	5.1	528
CARW-380	27¾	45⅛	28¼	39,000	6.5	3	2700	Side	1	Frigidaire	—	—	1	230	½	5.1	528
CUAZ-540	37½	62⅛	28¼	56,000	10.4	3	4300	Side	1	Frigidaire	—	—	1—3	208/220/230	½	7.2	694
CUAZ-670	37	54⅝	28¼	67,000	16.9	6	6150	Side	1	Frigidaire	—	—	3	208/220	⅝	10.7	836
Gaffers & Sattler—Utility Appliance Corp., 4851 S. Alameda St., Los Angeles, Calif.																	
G&SZTC-1	23⅝	28⅝	28⅛	22,000	5.3	3	2600	Side	1	Tecumseh	2	B21U16	1	230	¼	2.6	280
G&SZTC-2	33⅛	28⅝	28⅛	23,000	5.3	3	2600	Side	1	Bendix-West.	2	H490TA	3	230	¼	2.6	280
G&SZTC-1, 2	33⅝	28⅝	28⅛	30-35,000	5.3	4	2600	Side	1	Tecumseh	3	JE200	1—3	230	⅓	3.6/3.8	340
G&SZTH-1, 2	27	34	41	37,000	6	4	3000	Side	1	Tecumseh	3	JE300	1—3	230	⅓	4.1	450
G&S4T-1, 2	30	42	48	42-48,000	6	4	3300	Side	1	Tecumseh	4	PFB400	1—3	230	½	4.9/5.5	640
G&S6T-1, 2	30	42	48	57,000	12	8	5150	Side	1	Tecumseh	5	FB500	1—3	230	½	6.3	680
Genatron—General Air Conditioning Corp., 4542 E. Dunham St., Los Angeles 23, Calif.																	
VAG-301	28½	30	22	30,000	5.25	3	2600	Side/Top	1	Tecumseh	3½	PJE300	1	230	½	—	—
RCU-27	25	30	26	24,000	5.25	3	1500	Side	1	Tecumseh	2½	JE200	1	230	⅓	—	—
RCU-37	25	30	26	37,700	5.25	3	1400-2400	Side	1	Tecumseh	3½	PJE300	1—3	230/208/220	⅓	—	—
RCU-47	38	40	26	62,500	8.69	4	1800-4200	Side	1	Tecumseh	6.5	PFB500	1—3	230/208/220	¾	—	—
RCU-787	50	48	30	96,300	9.33	6	2600-5600	Side	1	York	8¾	TA682	3	208/220	1½	—	—
RCU-107	50	66	30	131,000	12.1	6	3800-8400	Side	2	Tecumseh	6.5	PFB500	3	208/220	2	—	—
RCU-157	50	76	30	196,500	14.3	6	3800-12,000	Side	2	York	8¾	TA682	3	208/220	5	—	—
General Electric—General Electric Co., Air Conditioning Dept., Troup Hwy., Tyler, Texas																	
TA25B	25¼	31⅝	28	25,000	4.1	3	1680	Side	1	G-E	2.5	—	1	230	⅓	2.7	305
TA33B	25¼	31⅝	28	32,400	4.1	3	2040	Side	1	G-E	3.3	—	1—3	230/208/220	⅓	3.5	322
TA40B	25¼	31⅝	28	38,800	4.7	3	2425	Side	1	G-E	4.0	—	1—3	230/208/220	½	4.7	341
TA53A	27½	70¼	27½	53,000	8.2	4	3100	Side	1	G-E	5.3	—	1—3	230/208/220	½	5.3	470
TA63A	27½	70¼	27½	62,600	10.1	4	3700	Side	1	G-E	6.3	—	1—2	230/208/220	¾	6.8	485
Heatwave—Southwest Mfg. Co., N. Elliot St., Aurora, Mo.																	
AK-301	30	32	41	33,850	8.4	2	1600	Top	1	Tecumseh	2	JB-300	1	230	½	2.6	290
AK-301	30	32	41	34,450	8.4	2	2400	Top	1	Tecumseh	3	JE-300	1—3	230	½	3.2	308
AK-401	30	32	41	49,910	8.4	3	3800	Top	1	Copeland	4	LRH-400	1—3	230	½	4.3	350
AK-501	32	32	41	56,600	14	2	3900	Top	1	Copeland	5	LRG-500	1—3	230	½	5.1	425
AK-752	32	32	41	86,500	14	3	5300	Top	1	Copeland	7½	MRG-750	3	230	½	7.0	550
EK-221	21	23	43	23,044	5	3	1600	Top	1	B-W	2	H-490TA	1	230	½	2.2	240
EK-321	21	23	43	33,694	5	3	2400	Top	1	Tecumseh	3	JE-300	1—3	230	½	3.2	270

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Curtis—Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 20, Mo.																	
CM240*	19¼	40¼	26	36,000	R-22	X Valve	—	Temp.	2.4	4	1200	—	(2) ¼	1	D	16x25	130
CM400*	22	47¼	36	60,000	R-22	X Valve	—	Temp.	4.0	4	2000	—	(2) ¼	2	D	16x20	200
CM630-4*	27⅝	64	44½	90,000	R-22	X Valve	—	Temp.	6.3	4	3000	—	½-1½	3	D	20x25	475

*Horizontal Air Handling Unit. Also available—U-Bonnet, Down Draft, Horizontal Duct, and Transom Units.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Custom-Temp—Custom-Temp Corp., Liberty, N. Y.																	
VAH-3*	73¼	40½	26	31†	12/22	X Valve	Holding	—	2.4	4	1200	—	¾	—	‡	—	—
VAH-5*	73¼	40½	26	51†	12/22	X Valve	Holding	—	4	4	2000	—	¾	—	‡	—	—
VAH-8*	73¼	46¼	27½	81†	12/22	X Valve	Holding	—	6	4§	3000	—	¾	—	‡	—	—
VAH-10*	73¼	54½	28⅝	101†	12/22	X Valve	Holding	—	8	4§	4000	—	1	—	‡	—	—
VAH-15*	78¼	72½	33½	151†	12/22	X Valve	Holding	—	12	4§	6000	—	(2) ¾	—	‡	—	—
VAH-20*	84¼	72¼	33½	201†	12/22	X Valve	Holding	—	16	4§	8000	—	2	—	‡	—	—
VAH-25*	90¼	96¼	38½	251†	12/22	X Valve	Holding	—	20	4§	10000	—	5	—	‡	—	—
VAH-30*	92¼	96¼	44½	301†	12/22	X Valve	Holding	—	24	4§	12000	—	5	—	‡	—	—
VAH-40*	83⅛	108½	48⅝	401†	12/22	X Valve	Holding	—	32	4§	16000	—	7½	—	‡	—	—
VAH-45*	82¼	108½	48⅝	451†	12/22	X Valve	Holding	—	36	4§	18000	—	7½	—	‡	—	—
VAH-50*	82¼	120½	48⅝	501†	12/22	X Valve	Holding	—	40	4§	20000	—	10	—	‡	—	—

*All flat horizontal coils in Vertical cabinets. †Tons with 4-row coil. Rated tons with 80° d.b. 67° w.b. entering air, 40° coil. ‡Available with either high or low velocity filter sections. §Optional with 5-6 row coils.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Day & Night—Day & Night Mfg. Co., La Puente, Calif.																	
240-VC	18½	16	18⅝	23,000	R-22	X Valve	6	Yes	2.19	2	850	—	—	—	—	—	80
360-VC*	18½	24½	18⅝	34,000	R-22	X Valve	10	Yes	3.65	3	1275	—	—	—	—	—	75
480-VC	18½	28½	18⅝	47,000	R-22	X Valve	14	Yes	4.36	3	1750	—	—	—	—	—	100
ACR-4C-30VC*†	18½	30½	18⅝	31,000	R-500	X Valve	10½	Yes	2.93	3	1150	—	—	—	—	—	65
ACR-4C-40VC*†	18½	34½	18⅝	42,000	R-13	X Valve	15½	Yes	3.65	3	1500	—	—	—	—	—	75
ACR-7C-50VC*†	18½	28½	18⅝	52,000	R-500	X Valve	18	Yes	4.36	3	1750	—	—	—	—	—	100
ACR-8C-60VC*†	18½	36½	18⅝	63,000	R-500	X Valve	21	Yes	5.83	3	2350	—	—	—	—	—	130
ACR-9B-H†	29⅝	54⅝	14⅝	76,000	R-500	X Valve	25	Yes	8.63	3	3500	—	—	—	—	—	140

*Available in horizontal flow. †Available in fan coil.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Delco—Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 6, N. Y.																	
CF-2SD	20½	26	26	24,000	R-22	Cap.	—	Temp.	1.89	3	750/.3	1075	¼	—	D	24x12	140
CF-3SD	20½	26	26	35,000	R-22	Cap.	—	Temp.	2.75	3	1100/.3	1075	¼	—	D	24x12	150
CF-4SD	20½	41	26	48,000	R-22	Cap.	—	Temp.	4.5	3	1400/.3	1075	½	—	D	30x12	220
CF-5SD	20½	41	26	61,000	R-22	Cap.	—	Temp.	4.5	3	1900/.3	1075	½	—	D	30x12	230
A-2D	14	18⅝	22	24,000	R-22	Cap.	—	Temp.	2.3	3	750	—	—	—	—	—	42†
A-3D	18	22¼	22	35,000	R-22	Cap.	—	Temp.	3.1	3	1100	—	—	—	—	—	57†
A-4SD	23	26⅝	22	48,000	R-22	Cap.	—	Temp.	5.4	3	1400	—	—	—	—	—	81†
A-6SD*	29	26⅝	22	61,000	R-22	Cap.	—	Temp.	5.4	3	2000	—	—	—	—	—	81†

*Without reducing coupling. †Coil and cabinet.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Dunham-Bush—Dunham-Bush, Inc., 179 South St., West Hartford 10, Conn.																	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Fedders—Fedders Corp., 58-01 Grand Ave., Maspeth, N. Y.																	
660EA	23	22	28⅝	—	R-22	Cap.	—	—	5.5	3	—	—	—	—	—	—	88
636EA	18	22½	24	—	R-22	Cap.	—	—	3.5	3	—	—	—	—	—	—	75
630EA	18	22	22¼	—	R-22	Cap.	—	—	2.1	3	—	—	—	—	—	—	62
660EB‡	20¼	26	40	—	R-22	Cap.	—	—	4.0	4	2000*	1075	(2) ¼	2	D	16x20x1	225
636EB‡	20¼	26	38	—	R-22	Cap.	—	—	2.5	4	1300†	1075	¼	1	D	25x16x1	140
630EB‡	20¼	26	38	—	R-22	Cap.	—	—	2.5	4	1100†	1075	¼	1	D	25x16x1	115

‡Also available horizontal flow without blower and filter. *At .3" static pressure (no filter). †At .3" static pressure (with filter).

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
FloatingAir—Friedrich Refrigerators, Inc., 1117 E. Commerce St., San Antonio, Texas																	
RE-RF-300	—	—	—	22,000	R-22	X Valve	Holding	Temp.	2.43	4	1150	890	⅛	—	—	—	165
REA-300	—	—	—	22,000	R-22	X Valve	Holding	Temp.	3.09	3	1150	—	⅛	—	—	—	66
CEF-300	—	—	—	22,000	R-22	X Valve	Holding	Temp.	2.43	4	1150	745	⅛	1	F	17⅞x23	300
RE-RF-500	—	—	—	53,500	R-22	X Valve	Holding	Temp.	4.37	4	1850	810	⅓	—	—	—	234
REA-500	—	—	—	53,500	R-22	X Valve	Holding	Temp.	4.37	4	1850	—	—	—	—	—	86
CEF-500	—	—	—	53,500	R-22	X Valve	Holding	Temp.	4.37	4	1850	635	⅓	1	F	30x25	305
RE-RF-750	—	—	—	81,500	R-22	X Valve	Holding	Temp.	6.16	4	2800	650	¾	—	—	—	430
CEF-750	—	—	—	81,500	R-22	X Valve	Holding	Temp.	6.16	4	2800	565	¾	2	F	15½x27½	450
REF-1001	—	—	—	102,000	R-22	X Valve	Holding	Temp.	10.6	3	3400	550	1	—	—	—	530
REF-1501	—	—	—	140,000	R-22	X Valve	Holding	Temp.	10.6	4	4400	630	1½	—	—	—	605

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Forston & Lincoln—The Forston Co., 1400 Conti St., Houston 2, Texas																	
200R-2-BLS	25¼	29½	35¼	24,000	R-22	Cap.*	—	Temp.	2.10	4	800	1075	⅛	1	Opt.	16x17†	150‡
300R-3-BLS	25¼	29½	35¼	36,000	R-22	Cap.*	—	Temp.	3.34	4	1300	1075	⅛	1	Opt.	16x17†	170‡
500R-5-BLS	41⅛	41⅛	36½	60,000	R-22	X Valve	—	Temp.	5.30	3	2000-3400	1725	⅛	1	Opt.	20x24†	300‡
750R-5-BLS	41⅛	41⅛	36½	90,000	R-22	X Valve	—	Temp.	5.30	4	3000-3400	1725	⅛	1	Opt.	20x24†	350‡
1000R-10-BLS	53¼	53	36½	120,000	R-22	X Valve	—	Temp.	7.5	4	4000-4400	1725	¾	1	Opt.	20x25†	375‡
1500R-15-BLS	38½	84	40	174,000	R-22	X Valve	—	Temp.	11.66	4	6000	—	1	1	Opt.	40x42†	400‡

*Expansion Valves used on all Heat Pump models. †Size can vary according to return air arrangement when installed—when and/or used with duct. ‡Crated.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																	
CVY-200UX	13	18½	22	24,000	12/22	X Valve	—	Temp.	2.36	3	800	—	—	—	—	—	43
CVW-200X	13	25	30	23,000	12/22	X Valve	—	Temp.	2.24	2	780	—	—	—	—	—	43
CVY-300UX	17	23	22	36,000	12/22	X Valve	—	Temp.	3.30	3	1200	—	—	—	—	—	59
CVW-300X	18	25	30	36,000	12/22	X Valve	—	Temp.	4.8	2	1230	—	—	—	—	—	84
CVW-500X	18	25	30	53,800	12/22	X Valve	—	Temp.	4.7	3	1840	—	—	—	—	—	93
CVW-200LX	24⅝	23	36½	28,200	12/22	X Valve	—	Temp.	2.04	4	880	865	⅛	1	D	16x20x1	190
CBW-300LX	30⅝	25	40¼	41,400	12/22	X Valve	—	Temp.	3.02	4	1280	780	⅛	1	D	25x20x1	240
CBY-300	24⅞	33½	22½	36,000	12/23	X Valve	—	Temp.	3.72	3	1200	1075	⅛	1	D*	16x32x1	185
CBY-500	24	42	23⅜	60,000	R-12	X Valve	—	Temp.	4.24	4	2000	800	⅛	2	D	20x20x1	230
CBY-750	28½	42	23⅜	88,100	R-13	X Valve	—	Temp.	6.27	4	3000	700	¾	2	D	20x25x1	270

*Filter furnished with optional plenum only. Note: Downflow and Horizontal cooling coil also available.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Gaffers & Sattler—Utility Appliance Corp., 4851 S. Alameda St., Los Angeles, Calif.																	
G&SZTD	17	17	20½	23-30,000	R-22	X Valve	8-10	Temp.	2.67	3	800	—	—	—	D	—	69
G&SSTD	18¼	21	30½	35-42,000	R-22	X Valve	11-15	Temp.	3.10	4	1200	—	—	—	—	—	74
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
G&SSTD	22½	30	21⅝	48-57,000	R-22	X Valve	15-16	Temp.	5.35	4	1600-2000	—	—	—	—	—	120

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Genatron—General Air Conditioning Corp., 4542 E. Dunham St., Los Angeles 23, Calif.																	
VAG302	16	30	16	—	—	—	—	Temp.	—	—	1400	1060	⅛	—	—	—	—
VAG303	16	30	16	29,000	R-22	Cap.	—	Temp.	2.52	4	—	—	—	—	—	—	—
RBS-27	16	30	25	24,000	R-22	Cap.	—	Temp.	1.9	4	1000	1060	⅛	1	P	9x20	—
RBS-37	17¼	30	25	37,700	R-22	Cap.	—	Temp.	2.52	4	1400	1060	⅛	1	P	16x20	—
RBS-57	20⅜	40	26	65,500	R-22	Cap.	—	Temp.	4.44	4	1800-2400	600-750	⅜	2	P	20x20	—
RBS-757	26	48	30	98,300	R-22	Cap.	—	Temp.	5.0	4	2100-3500	550-650	1	2	P	20x20	—
RBS-107	26	66	30	131,000	R-22	Cap.	—	Temp.	7.0	4	3500-4800	600-800	1½	2	P	20x30	—
RBS-157	28	76	30	196,500	R-22	Cap.	—	Temp.	11.8	4	5400-7200	550-700	3	2	P	25x34	—

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
General Electric—General Electric Co., Air Conditioning Dept., Troup Hwy., Tyler, Texas																	
TXA-250C	18¼	15¼	21½	31,400	R-22	X Valve	—	—	2.2	3	—	—	—	—	—	—	39
TXA-300C	18¼	18¼	21½	38,100	R-22	X Valve	—	—	3.05	3	—	—	—	—

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville 4, Tenn.																	
A24CUSA	23¾	30½	27⅝	23,100	3.64	2	1900	Side	1	Tecumseh	—	B21T18	1	230	⅕	2.83	—
A32CUSA	23⅝	30½	27⅝	32,300	3.64	3	1700	Side	1	Tecumseh	—	PJG300	1—3	230/208/220	⅕	3.86	—
A47CUSA	28⅝	48¾	31⅞	47,200	7.81	2	4000	Side	1	Tecumseh	—	PFB400	1—3	230/208/220	⅓	6.08	—
A60CUSA	28⅝	48¾	31⅞	60,600	7.81	3	4000	Side	1	Tecumseh	—	FB500	1—3	230/208/220	½	7.28	—
Holly—Holly-General Co., Div. of Siegler Corp., 875 S. Arroyo Pkwy., Pasadena, Calif.																	
AR3-22	28½	48¼	18½	22,000	5.0	3	3000	Side	1	Tecumseh	2	—	1	230	⅛	—	250
AR3-34	28½	48¼	18½	36,000	5.0	4	3000	Side	1	Tecumseh	3	—	1—3	230	⅓	3.5	275
AR3-42	28½	48¼	18½	40,700	5.0	5	3500	Side	1	Tecumseh	3	—	1—3	230	½	3.4	275
AR3-48	28½	71¼	18½	48,600	8.25	3	4000	Side	1	Tecumseh	4	—	1—3	230	⅛	—	350
AR3-60	28½	71¼	18½	60,000	8.25	4	5000	Side	1	Tecumseh	5	—	1—3	230	½	6.4	350
Iron Fireman, Timken Silent Automatic, Conco—Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio																	
24AC	23¾	30½	27⅞	24,000	3.67	2	1750	Side	1	Tecumseh	2	B21U18	1	230	⅕	2.98	205
35AC	23¾	30½	27⅞	35,000	3.67	3	1700	Side	1	Tecumseh	3	JE300	1—3	230/208	⅓	4.5	260
47AC	28⅝	48¾	31⅞	48,000	7.64	2	4000	Side	1	Tecumseh	4	PFB400	1—3	230/208	(2) ⅓	6.08	445
60AC	28⅝	48¾	31⅞	61,000	7.64	2	4000	Side	1	Tecumseh	5	FB-500	1—3	230/208	(2) ⅓	7.36	455
Janitrol—Surface Combustion Corp., 400 Dublin Ave., Columbus, Ohio																	
A201-85	24¾	30½	27⅞	22,100	3.65	2	1900	Side	1	Tecumseh	2	B21U18	1	230	⅕	2.82	235
SRA9K-65	28	34½	34½	34,900	7.5	3	3200	Top	1	Tecumseh	3	JE300	1—3	208/230	⅛	3.85	343
SRA11K-65	33	39	39	58,700	10.0	3	4400	Top	1	Tecumseh	5	FB500	1—3	208/230	⅓	6.60	519
A403U-75	49½	51⅛	30½	76,100	13.4	3	4800	Top	1	Westinghouse	7	CL8-81	3	208/220	1	9.4	900
Kool Kastle—Kool Engineering Corp., 1320 N. Clybourn Ave., Chicago 10, Ill.																	
200A*	23	29	29	23,500	5.55	1	3000	Top	1	Tecumseh	2	B74T16	1	230	⅛	2.2	200
300A*	25	29	29	36,200	8.55	2	3000	Top	1	Tecumseh	3	JE300	1	230	⅛	3.2	275
200W	14	18	36	24,200	——— Water Cooled ———				1	Tecumseh	2	B74T16	1	230	—	2.0	200
300W	14	18	36	37,400	——— Water Cooled ———				1	Tecumseh	2	JE300	1	230	—	3.0	250
*Also available water cooled.																	
Laurel—Laurel Products, Inc., P. O. Box 946, Laurel, Miss.																	
LCU 2	25	60	25½	24,000	4.06	3	—	Side	1	B-W/Tecumseh	2	—	1	230	¼	12.6	—
LCU 3	34	30	53	36,000	6.25	3	—	Side	1	Tecumseh	3	—	1—3	230	⅓	19.5/14.4	—
LCU 4	34	30	53	48,000	6.25	4	—	Side	2	B-W	4	—	1—3	230	½	25.2/19.8	—
LCU 5	34	30	53	60,000	10.0	3	—	Side	1	Tecumseh	5	—	1—3	230	¾	30.5/25.8	—
Lennox—Lennox Industries, Inc., 200 S. 12th Ave., Marshalltown, Iowa																	
HSA2-201	22¾	30¾	33½	22,000*	3.75	3	1975	Side†	1	—	2	—	1	230	¼	2.8	317
HSA2-301	29½	32⅝	31	35,000*	5.92	3	3200	Side†	1	—	3	—	1—3	208/220/230	—	3.9	—
HSA3-301	34½	48¾	33⅝	37,000*	6.72	3	2830	Top/Side	1	—	2	—	1—3	208/220/230	⅛	3.9	500
HSA3-401	34½	59¾	33	49,000*	8.44	3	3430	Top/Side	1	—	4	—	1—3	208/220/230	⅛	5.9	650
HSA3-501				58,000*	—	—	—	Side†	1	—	5	—	1—3	208/220/230	—	7.2	—
HSA3-501	28	88½	37¾	59,000*	9.88	3	4650	Top/Side	1	—	5	—	1—3	208/220/230	¾	7.2	740
HSA2-753	33⅝	67¼	35½	85,000*	12.5	3	6620	Side†	1	—	7½	—	3	208/230	¾	9.0	1121
HSA3-1003	39½	80¾	36¾	114,000*	17.7	3	8800	Side†	1	—	10	—	3	208/230	1	12.2	1456
*Rated under ARI standard 210-58. †Pull through.																	
Living-Air—Mayflower Air-Conditioners, Inc., Duluth Ave. & E. Seventh St., St. Paul 6, Minn.																	
RP-3	23¾	30¾	27⅞	24,000	3.65	2	1750	Side	1	Tecumseh	2	B21U18	1	230	⅕	2.98	235
RP-3	23¾	30¾	27⅞	35,000	3.65	3	2700	Side	1	Tecumseh	3	JE300	1—3	230	⅓	4.5	295
RP-4	28⅝	31⅞	48¾	48,000	7.73	2	4000	Side	1	Tecumseh	4	PFB400	1—3	230	(2) ⅓	6.08	505
RP-6	28⅝	31⅞	68¾	61,000	7.73	3	4000	Side	1	Tecumseh	6	FB500	1—3	230	(2) ⅓	7.35	515
Luxaire—The C. A. Olsen Mfg. Co., Elyria, Ohio																	
CA-21	32	36½	38½	20,700*	4.5	3	1800	Top	1	Westinghouse	2	CL8-21	1	230	⅛	2.99	450†
CA-32	34½	36¾	38½	35,300*	6.6	3	2650	Top	1	Tecumseh	3	PJE-300	1—3	230/208/220	⅛	4.58	414†
CA-52	34½	38¾	47¾	56,100*	8.6	3	3700	Top	1	Tecumseh	5	FB-500	1—3	230/208/220	¾	7.03	572†
Majestic—The Majestic Co., Inc., Huntington, Ind.																	
RC24	23¾	30¾	27⅞	24,000	4.7	3	1800	Side	1	Tecumseh	2	—	1	230	⅓	2.83	235
RC35	28¾	30¾	27⅞	35,000	5.8	3	1800	Side	1	Tecumseh	3	—	1—3	230	⅓	4.52	295
RC47	28¾	48¾	31⅞	48,000	9.3	3	4000	Side	2	Tecumseh	4	—	1—3	230	(2) ⅓	6.08	505
RC60	28¾	48¾	31⅞	61,000	9.3	3	4000	Side	1	Tecumseh	5	—	1—3	230	(2) ⅓	7.28	515
Marvair—Muncie Gear Works, P. O. Box 433, Cordele, Ga.																	
402Z	28	44	33½	24,600	3.75	3	2000	Side	1	Tecumseh	2	JE 200	1	230	⅓	2.96	510
405Z	28	44	33½	37,400	4.33	4	3000	Side	1	Tecumseh	3	JE 300	1—3	230/208	½	3.75	520
406Z	28	44	33½	60,800	7.5	3	4400	Side	1	Tecumseh	5	JE 500	1—3	230/208	¾	6.50	670
Mathes—The Mathes Co., Div., Glen Alden Corp., 1501 East Broadway, Fort Worth 5, Texas																	
20 HAR-1F	28	34	24	22,000	2.9	2	2200	Side	1	B-W	2.0	H400TA	1	230	⅓	2.24	260
26 HAR-1F	33	47	24	26,000	3.4	2	2200	Side	1	Tecumseh	2.6	PJG 300	1	230	⅓	2.64	225
32 HAR-1F	33	47	24	32,000	3.4	2	2200	Side	1	Tecumseh	3.2	PJG 300	1	230	⅓	3.54	230
36 HAR-1-3F	33	47	24	36,000	5.4	4	2200	Side	1	Tecumseh	3.6	PJE 300	1—3	230/208/220	½	4.51	335
48 HAR-1-3F	32	61	27	48,000	10.9	2	3300	Side	2	B-W	2.5	H400TA	1—3	230/208/220	½	5.33	480
62 HAR-1-3F	32	61	27	62,000	10.9	2	3500	Side	1	Tecumseh	6.2	PFB 500	1—3	230/208/220	½	6.85	529
90 HAR-3-4F	45	75	27	90,000	19.6	2	7650	Side	1	Copeland	9.0	MRG 750	3	208/220/440	¾	8.89	540
120 HAR-3-4F	45	75	27	120,000	19.6	3	7650	Side	1	Copeland	12.0	5RH900	3	208/220/440	¾	11.1	695

All models except 180, 240 available in 3 different furnace coils. Models 26, 32, 36, 48, 62 available in three different blower coil units; others in two. Models 26, 62, 90 available in two different plenum blower coil units.

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Rows Deep	Blower C.f.m.	R.p.m.	Motor Hp.	Air Filter No.	Type	Dimensions	Net Weight
Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville 4, Tenn.																	
A24EUSA	14	18⅝	22	—	R-22	Cap.	3# 9	—	2.1	3	700*	1075	¼	1	D	24x12	145
A32EUSA	18	25⅛	22	—	R-22	Cap.	4# 12	—	2.5	4	1000*	1075	½	1	D	24x12	155
A47EUSA	23	28⅛	22	—	R-22	Cap.	7# 3	—	4.0	4	2000*	1075	(2) ¼	2	D	24x12	225
A60EUSA	23	28⅝	22	—	R-22	Cap.	9# 10	—	4.0	4	2000*	1075	(2) ¼	2	D	24x12	225
*At .2 in. external static.																	
Holly—Holly-General Co., Div. of Siegler Corp., 875 S. Arroyo Pkwy., Pasadena, Calif.																	
V3-22	16¼	16¼	20¼	22,000	R-22	X Valve	½	—	1.84	4	800‡	—	—	2	D	16x20	50
V3-34	16¼	22¼	20¼	34,000	R-22	X Valve	½	—	3.20	3	1200‡	—	—	2	D	16x20	75
V3-42	16¼	22¼	20¼	42,000	R-22	X Valve	½	—	3.20	4	1350‡	—	—	2	D	16x20	85
V3-48	16¼	30¼	20¼	48,000	R-22	X Valve	½	—	3.20	4	1600‡	—	—	4	D	15x20	130
V3-60	16¼	30¼	20¼	60,000	R-22	X Valve	½	—	4.0	3	2000‡	—	—	4	D	15x20	130
‡C.f.m. coil requires.																	
Iron Fireman, Timken Silent Automatic, Conco—Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio																	
24AC "A"	14	18⅝	22	24,000	R-22	Cap.	2# 10	Temp.	2.2	3	750	—	—	—	—	—	25
35AC "A"	18	22⅛	22	35,000	R-22	Cap.	3# 7	Temp.	3.1	3	1100	—	—	—	—	—	36
47AC "A"	23	28⅝	22	47,000	R-22	Cap.	3# 11	Temp.	5.4	3	1600	—	—	—	—	—	53
60AC "A"	23	28⅞	22	60,000	R-22	Cap.	7# 13	Temp.	5.4	3	2000	—	—	—	—	—	53
UB "H" 24	21½	25⅛	25	24,000	R-22	Cap.	3# 10	Temp.	1.89	3	700	1075	¼	—	—	—	93
UB "H" 35	21½	25⅛	25	35,000	R-22	Cap.	3# 7	Temp.	2.75	3	1100	1075	½	—	—	—	101
UB "H" 47	26⅝	30	25	47,000	R-22	Cap.	3# 11	Temp.	4.50	3	1600	1075	½	—	—	—	123
UH "H" 60	26⅝	30	25	60,000	R-22	Cap.	7# 13	Temp.	4.50	3	1800	1075	½	—	—	—	129
EB-24-"H"	20¼	38	28	24,000	R-22	Cap.	2# 10	Temp.	1.89	3	750	1075	¼	1	D	24x12	145
EB-35-"H"	20¼	38	28	35,000	R-22	Cap.	3# 7	Temp.	2.75	3	1100	1075	½	1	D	24x12	166
EB-47-"H"	20¼	38	41	47,000	R-22	Cap.	3# 11	Temp.	4.50	3	1600	1075	½	1	D	36x12	200
EB-60-"H"	20¼	38	41	60,000	R-22	Cap.	7# 13	Temp.	4.50	3	1800	1075	½	1	D	36x13	248
Janitrol—Surface Combustion Corp., 400 Dublin Ave., Columbus, Ohio																	
21HV	26	18½	20½	21,800	R-22	X Valve	—	Temp.	1.91	3	800	—	—	—	—	—	38
31HV	26	22½	20½	34,900	R-22	X Valve	—	Temp.	3.12	3	1300	—	—	—	—	—	46
51HV	26	28½	20½	58,300	R-22	X Valve	—	Temp.	4.72	3	2000	—	—	—	—	—	56
61HV	26	42½	20½	76,100	R-22	X Valve	—	Temp.	6.21	3	2400	—	—	—	—	—	80
30B	36	24	19¼	21,400	R-22	X Valve	—	Temp.	2.19	3	800	632	½	—	—	—	175
50B	36	24	19¼	34,800	R-22	X Valve	—	Temp.	2.19	4	1200	862	½	—	—	—	180
50B	40	28	22½	58,700	R-22	X Valve	—	Temp.	3.79	4	2000	718	½	—	—	—	245
71B	28½	50½	30¾	74,700	R-22	X Valve	—	Temp.	6.67	3	2400	700	¾	—	—	—	380
20H	15½	33	7¾	21,800	R-22	X Valve	—	Temp.	2.08	3	800	—	—	—	—	—	52
30H	20¾	33	7¾	34,900	R-22	X Valve	—	Temp.	2.50	4	1200	—	—	—	—	—	59
50H	20¾	45	7¾	58,300	R-22	X Valve	—	Temp.	4.36	3	2000	—	—	—	—	—	99
70H	29¾	45	7¾	76,100	R-22	X Valve	—	Temp.	6.88	3	2400	—	—	—	—	—	109
20V	13¼	22	24⅛	21,800	R-22	X Valve	—	Temp.	2.22	3	800	—	—	—	—	—	60
30V	16	22	24⅝	34,900	R-22	X Valve	—	Temp.	2.50	4	1250	—	—	—	—	—	78
50V	18¼	27	32⅝	58,300	R-22	X Valve	—	Temp.	5.00	3	2000	—	—	—	—	—	104
Kool Kastle—Kool Engineering Corp., 1320 N. Clybourn Ave., Chicago 10, Ill.																	
200	16	23	20	24,000	R-22	X Valve	4	Temp.	2.82	2	800	—	—	—	—	—	20
300	16	23	20	36,000	R-22	X Valve	6	Temp.	4.37	2	1200	—	—	—	—	—	30
Laurel—Laurel Products, Inc., P. O. Box 946, Laurel, Miss.																	
FC-2V	21	20	22½	26,000	R-22	X Valve	—	—	—	—	—	—	—	—	—	—	—
FC-3V	21	20	22⅝	36,000	R-22	X Valve	—	—	—	—	—	—	—	—	—	—	—
FC-4V	21	20	22⅝	49,200	R-22	X Valve	—	—	—	—	—	—	—	—	—	—	—
FC-5V	21	29½	22⅝	60,000	R-22	X Valve	—	—	—	—	—	—	—	—	—	—	—
LVAH 2	44	30	24	25,800	R-22	X Valve	—	—	2.12	3	800	—	¼	1	D	20x25x1	—
LVAH 3	44	30	24	40,200	R-22	X Valve	—	—	3.12	3	1200	—	¼	1	D	30x25x1	—
LVAH 4	53	36	28	49,200	R-22	X Valve	—	—	3.65	4	1600	—	½	2	D	16x20x1, 20x25x1	—
LVAH 5	53	36	28	62,700	R-22	X Valve	—	—	5.08	3	2000	—	½	2	D	16x20x1, 20x25x1	—
Lennox—Lennox Industries, Inc., 200 S. 12th Ave., Marshalltown, Iowa																	
LSB1-300	61½	22⅝	27⅛	36,000	R-22	—	—	Temp.	2.94	3	1200	542-740	½	—	Opt.	—	280
LSB1-500	65½	28	27⅛	59,000	R-22	—	—	Temp.	4.48	4	2000	633-864	½	—	Opt.	—	485
C261-3004	53¾-60¾	26	28	37,000	R-22	—	—	Temp.	3.12	4	1200	Selected	—	1	D	40x24	296-315
C341-5004	53¾-60¾	34	28	59,000	R-22	—	—	Temp.	4.37	4	2000	Selected	—	1	D	40x32	351-369
C521-7504	53¾-60¾	52	28	85,000	R-22	—	—	Temp.	6.88	4	3000	Selected	—	2	D	40x24	613-647
C681-10004	53¾-60¾	68	28	114,000	R-22	—	—	Temp.	9.36	4	4000	Selected	—	2	D	40x32	729-765
‖All "Landmark" units equipped with "Hi-Boy," "Lo-Boy," or "Reverse-Flo" blowers as required.																	
Living-Air—Mayflower Air-Conditioners, Inc., Duluth Ave. & E. Seventh St., St. Paul 6, Minn.																	
DCH2	20¼	38	38	24,000	R-22	Cap.	5# 14	Temp.	1.89	3	750	1075	¼	1	—	24x12	172
DCH3	20¼	38	38	35,000	R-22	Cap.	6# 13	Temp.	2.75	3	1100	1075	½	1	—	24x12	182
DCH4	20¼	38	41	48,000	R-22	Cap.	7# 13	Temp.	4.5	3	1600	1075	½	1	—	36x12	255
DCH6	20¼	38	41	61,000	R-22	Cap.	8# 9	Temp.	4.5	3	1800	1075	½	1	—	36x12	255
200-UC	13¼	25⅝	10	24,000	R-23	Cap.	5# 14	Temp.	1.89	3	—	—	—	—	—	—	30
300-UC	18⅝	25⅝	10	35,000	R-23	Cap.	6# 13	Temp.	2.75	3	—	—	—	—	—	—	43
400-UC	18⅝	40¼	10	48,000	R-23	Cap.	7# 12	Temp.	4.5	3	—	—	—	—	—	—	62
600-UC	18⅝	40¼	10	61,000	R-23	Cap.	8# 0	Temp.	4.5	3	—	—	—	—	—	—	62
Luxaire—The C. A. Olsen Mfg. Co., Elyria, Ohio																	
DXO-21	12½	15½	15½	21,800§	R-12	X Valve	Var.	Temp. Opt.	3.1	2	800	—	—	—	—	—	25†
DXO-32	15	18⅛	18⅛	36,800§	R-22	X Valve	Var.	Temp. Opt.	5.0	2	1200	—	—	—	—	—	40†
DXO-52	17½	27	18⅛	56,300§	R-22	X Valve	Var.	Temp. Opt.	6.8	2	1750	—	—	—	—	—	50†
H-DXH-2	13½	24⅝	19	21,800	R-12	X Valve	Var.	Temp. Opt.	2.4	3	800	—	—	—	—	—	60†
H-DXH-32	21⅝	31	10	36,600	R-22	X Valve	Var.	Temp. Opt.	3.3	3	1200	—	—	—	—	—	58†
H-DXH-52	21⅝	43	10	57,100	R-22	X Valve	Var.	Temp. Opt.	5.0	3	2000	—	—	—	—	—	85†
DXR-322	15	22½	32	36,000	R-22	X Valve	Var.	Temp. Opt.	3.3	3	1200	—	—	—	—	—	104†
DXR-522	16	30	38	56,500	R-22	X Valve	Var.	Temp. Opt.	5.0	3	2000	—	—	—	—	—	158†
H-BC-32	22	29	26	34,000**	R-22	X Valve	Var.	Temp. Opt.	3.3	3	1200	—	½	1	D	20x25	190†
H-BC-52	23	31	29½	58,000**	R-22	X Valve	Var.	Temp. Opt.	5.0	3	2000	—	½	2	D	20x20	270†
§Calorimeter Tests in accordance with ASRE Standard 14-61. †Shipping weight. ‡Counterflow. ‖Rated with Series CA Condensing Unit. Standard Conditions: 95° F. Air entering Condenser Coil, 80° F. d.b. and 67° F. w.b. Air entering Cooling Coil. **Net Capacity: Heat generated by Blower Motor is deducted.																	
Majestic—The Majestic Co., Inc., Huntington, Ind.																	
BC24	13½	22	22	24,000	R-22	Cap.	—	—	2.2	3	800	—	—	—	—	—	32
BC35	17½	26	26	35,000	R-22	Cap.	—	—	3.2	3	1200	—	—	—	—	—	40
EC47	21½	29½	29½	48,000	R-22	Cap.	—	—	5.6	3	1700	—	—	—	—	—	54
EC60	21½	29½	29½	61,000	R-22	Cap.	—	—	5.6	3	2000	—	—	—	—	—	54
Marvair—Muncie Gear Works, P. O. Box 433, Cordele, Ga.																	
402Z	18	26	34⅝	24,600	R-22	X Valve	10	Temp.	1.67	4	800	—	¼	—	D	16x25x1	200
405Z	26	26	36⅝	37,400	R-22	X Valve	10	Temp.	3.36	4	1200	—	½	—	D	20x25x1	210
406Z	24	36	43½	60,800	R-22	X Valve	14	Temp.	4.43	4	2000	—	½	—	D	20x36x1	237
Mathes—The Mathes Co., Div., Glen Alden Corp., 1501 East Broadway, Fort Worth 5, Texas																	
20 EU-F	17	22½	22½	22,000	R-22	Cap.	—	Temp.	2.8	2	825	1075	¼	1	D	20x20	31
26 EU-F	17	22½	23½	26,000	R-22	Cap.	—	Temp.	2.8	3	975	1085	½	1	D	20x20	33
32 EU-F	17	22½	22½	32,000	R-22	Cap.	—	Temp.	2.8	4	1200	1085	½	1	D	20x20	36
36 EU-F	17	22½	22½	36,000	R-22	Cap.	—	Temp.	2.2	2	1350	590	½	1	D	20x25	44
48 EU-F	24	30	28	48,000	R-22	Cap.	—	Temp.	5.8	3	1800	725	½	2	D	16x25	104
62 EU-F	24	30	28	62,000	R-22	Cap.	—	Temp.	5.8	3	2810	790	½	2	D	16x25	104
90 HEB-F	24	30	28	90,000	R-22	Cap.	—	Temp.	8.2	3	2975	905	1	2	D	16x25	239
120 HEB-F	31	64	34	120,000	R-22	Cap.	—	Temp.	10.9	3	4500	700	1½	3	D	20x25	286
180 HEB-F	43	66	34	180,000	R-22	Cap.	—	Temp.	16.6	3	6750	525	(2) 1	6	D	20x20	475
240 HEB-F	43	65	34	240,000	R-22	Cap.	—	Temp.	20.2	3	9000	545	(2) 1½	6	D	20x25	515

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Miami Air—Miami Products, Inc., 22 Ave., N.W., Miami, Okla.																	
248	37	27*	—	24,000	6.8	1	2040	Top	1	Tecumseh	2	JB 200	1	220	½	—	285
368	44	27*	—	36,000	10.47	1	3140	Top	1	Tecumseh	3	JE 300	1—3	220	½	—	282
488	50	34*	—	48,000	16.24	1	4060	Top	1	Tecumseh	4	FB 400	1—3	220	½	—	400
608	56	34*	—	60,000	20.3	1	6080	Top	1	Tecumseh	5	FB 500	1—3	220	½	—	475
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*Diameter.																	
Moncrief—The Henry Furnace Co., Medina, Ohio																	
CA-21	32	26¼	28¼	30,700*	4.5	3	1800	Top	1	Westinghouse	2	CLS-21	1	230	½	2.99	450†
CA-32	34½	26¼	28¼	36,500*	6.6	3	2650	Top	1	Tecumseh	3	FJE-300	1—3	230/208/220	½	4.56	434†
CA-52	34½	28¼	47¾	54,100*	8.8	3	3700	Top	1	Tecumseh	5	FB-500	1—3	230/208/220	¾	7.08	572†
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*Calorimeter Tests in accordance with ASRE Standard 14-41. †Shipping weight. ‡Counterflow. ‖Rated with Series CA Condensing Unit. Standard Conditions: 95° F. Air entering Condenser Coil, 80° F. d.b. and 67° F. w.b. Air entering Cooling Coil. **Net Capacity: Heat generated by Blower Motor is deducted.																	
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.																	
MRA200	30½	29	24⅜	22,000	—	—	—	Side	1	Tecumseh	2	—	1	230	—	—	320
MRA300	36	40½	26⅜	36,500	—	—	—	Side	1	Tecumseh	3	—	1—2	230	—	—	385
MRA500	36⅜	34½	48⅜	60,000	—	—	—	Side	1	Tecumseh	5	—	1—2	230	—	—	490
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 1, Wis.																	
908-1-5	38½	52	27¼	50,000*	9.16	3	5500	Side	1	Worthington	5	2JF3-5	1—3	230/208/220	1	6.67	795
908-1-7	41¼	67	31⅜	80,000*	12.5	5	6500	Side	1	Worthington	7.5	2JF5-7	3	208/220	1½	10.36	985
918-2	31¼	24	28⅛	22,000*	3.76	3	1650	Top	1	Tecumseh	2	B21U18	1	230	¼	2.62	275
918-1-31	30½	28⅝	34⅛	34,000*	5.7	3	2700	Top	1	Tecumseh	3	JE-300	1—3	230/208/220	½	3.96	375
918-4	29⅝	48¼	34⅛	45,000*	8.35	3	4200	Top	1	Tecumseh	4	FFB-400	1—3	230/208/220	½	5.84	500
918-5	29⅝	48¼	34⅛	56,000*	10.4	3	4650	Top	1	Tecumseh	5	FFB-500	1—3	230/208/220	½	7.30	510
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*ARI Standard 210-58.																	
Northern-Aire—Great Northern Mfg. Co., 1056 N. Wood St., Chicago, Ill.																	
2 Ton A	34	36	44⅜	22,500	—	4	—	Side	1	Tecumseh	2	JB200	1—3	220/230	—	2.6	410*
3 Ton A	34	36	44⅜	36,300	—	4	—	Side	1	Tecumseh	3	JE300	1—3	220/230	—	3.7	430*
5 Ton A	38	41½	53	60,000	—	4	—	Side	1	Tecumseh	5	FB500	1—3	220/230	—	6.5	580*
*Shipping weight.																	
Payne—The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.																	
240AR	20	28¼	28¼	23,000*	4.60	4	1130	Side	1	B-W	2	CH490TA-2	1	230	¼	2.8	205
360AR	22	34	38	34,000*	6.58	4	1800	Side	1	Tecumseh	3	JE300	1—3	230/220	¼	4.1	240
480AR	28	29	41	47,000*	6.98	4	2400	Side	1	Tecumseh	4	FFB400	1—3	230/220	½	5.2	295
30RAC	36½	32⅝	27½	31,000*	4.94	3	2100	Side	1	Carrier	....	6D36	1—3	230/220/440	½	3.4	430
40RAC	36⅝	37⅞	48⅛	42,000*	6.72	3	3000	Side	1	Carrier	....	6D48	1—3	230/220/440	½	5.3	530
50RAC	36⅝	37⅞	48⅛	52,000*	7.62	3	2300	Side	1	Carrier	....	6D44	1—3	230/220/440	½	6.0	585
60RAC	37½	36½	47¼	63,000*	9.65	4	4000	Side	1	Carrier	....	6D48	3	220/440	1	7.3	595
75RAC	39½	73⅝	33½	76,000*	12.07	3	5000	Side	1	Carrier	....	6D62	3	220/440	1	8.6	980
*Rated under ARI standard.																	
Perfection—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																	
PAR20	28⅝	26¼	26¼	22,000	3.65	3	1800	Top	1	B-W	2	CH490TA-2	1	230	1/10	....	335
PAR31	37⅛	30¼	30⅝	35,000	4.85	4	2800	Top	1	Tecumseh	3	PJE 300-1	1—3	230/208/220	¼	....	360
PAR31	43⅝	36⅛	36⅛	57,000	7.43	4	4300	Top	1	Tecumseh	5	PFB 500-1	1—3	230/208/220	½	....	550
PA83C	56	62	35	95,600	13	5	7500	Side	1	Copeland	7½	MRG-750	3	208/230	1½	....	1400
PA103C	56	62	35	111,000	13	7	8600	Side	1	Copeland	10	9R8-1000	3	208/230	2	....	1460
PA153C	56	62	35	171,200	26	5	15000	Side	2	Copeland	7½	MRG-750	3	208/230	(2) 1½	....	2800
												MRG-750 &			1½ &		
PA183C	56	62	35	196,800	26	5-7	16100	Side	2	Copeland	7½-10	9R5-1000	3	208/230	2	....	2870
PA203C	56	62	35	220,000	26	7	17200	Side	2	Copeland	10	9R8-1000	3	208/230	(2) 2	....	2940
Permaglas—A. O. Smith Corp., P. O. Box 28, Kankakee, Ill.																	
RAC-24-AB-1-3	23	24	26	22,500	4.47	3	1800	Side	1	Tecumseh	2	JB300	1—3	230/220	¼	3.0	410
RAC-36-AB-1-3	23	24	26	35,300	6.4	3	2500	Side	1	Tecumseh	3	JE300	1—3	230/220	½	4.2	439
RAC-30-AF-1	36⅞	26	26	18,200	3.66	3	1650	Top	1	Tecumseh	1¾	B74T16	1	230	1/12	2.3	266
RAC-24-AF-1	36⅞	26	26	23,800	3.66	3	2200	Top	1	Tecumseh	2	JB200	1	230	1/10	3.6	313
RAC-36-AF-1	38	30	30	33,200	5.06	4	2800	Top	1	Tecumseh	3	JE300	1—3	230/220	¼	4.6	435†
RAC-60-AF-1-3	45	36	36	56,000	7.56	4	4200	Top	1	Tecumseh	5	FB500	1—3	230/220	½	7.7	672‡
†423 lbs. for 3-phase model. ‡655 lbs. for 3-phase model.																	
Rangaire—Cobell Industries, Inc., Cleburne, Texas																	
A-572	26	35½	48⅜	24,400	4.1	3	1750	Side	1	Copeland	2	U811-200	1	240	½	3.10	465
A-573	26	35½	48⅜	37,300	4.6	4	2800	Side	1	Copeland	3	8R28	1—3	240	½	4.20	510
A-562	28½	34	32½	33,500	4.6	4	2000	Side	1	Tecumseh	3	JE300	1—3	240	(2) 1/15	4.20	310
A-574	27	35½	48⅜	47,800	6.1	4	3500	Side	1	Copeland	4	LRH420	1—3	240	½	6.30	565
A-575	27	35½	48⅜	62,200	7.6	4	4200	Side	1	Copeland	5	LRG530	1—3	240	½	6.50	575
EC572*	27⅝	23⅝	57⅛	26,700	....	....	500	Side	1	Copeland	2	U811-300	1	240	1/15	2.70	580
EC573*	27⅝	23⅝	57⅛	38,700	....	....	750	Side	1	Copeland	3	8R28	1—3	240	1/15	3.70	660
EC574*	27⅝	23⅝	57⅛	58,700	....	....	1000	Side	1	Copeland	4	LRH420	1—3	240	1/15	5.30	730
EC575*	33⅛	23⅝	61⅝	64,700	....	....	1350	Side	1	Copeland	5	LRG530	1—3	240	¼	5.90	820
EC576*	27⅝	47¼	57⅛	94,300	....	....	1875	Side	1	Copeland	7½	MRG750	3	240	(2) 1/15	8.20	1190
EC5710*	33⅛	47¼	61⅝	131,500	....	....	2500	Side	1	Copeland	10	9R81000	3	240	(2) ¼	10.60	1370
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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*Evaporative Condenser Units.																	
RCA Whirlpool—Whirlpool Corp., St. Joseph, Mich.																	
RC-7200-3	26⅞	23⅝	26⅝	19,500	3.25	3	1700	Side	1	Tecumseh	2	B74T16	1	230	⅛	2.4	275
RC-7300-3-7	29½	25⅞	30⅝	32,500	3.64	4	2500	Side	1	Tecumseh	3	JE-300	1—3	230/220	⅛	4.1/3.8	345
RC-7500-3-7	37½	46⅜	31⅞	57,500	6.95	4	4300	Side	1	Tecumseh	5	FB500	1—3	230/220	¾	7.0/6.5	515
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Rheemaire—Rheem Mfg. Co., 7600 S. Kedzie Ave., Chicago 52, Ill.																	
180E-200B	22⅛	17⅛	45¼	22,000	Rheem "Air-Film" Condenser			Side	1	Copeland	....	UW8-100C	1	230	⅛	2.18	230
RA30B	23⅝	17⅛	48⅛	28,000	Rheem "Air-Film" Condenser			Side	1	Copeland	....	U89-150C	1	230	⅛	2.82	283
RA40B	23⅝	17⅛	48⅛	40,000	Rheem "Air-Film" Condenser			Side	1	Tecumseh	....	JE200	1—3	230/220	⅛	3.59	328
RB57B1	31¼	23⅝	52	57,000	Rheem "Air-Film" Condenser			Side	1	Copeland	....	3R42	1	230	½	5.61	502
RB57B3	31¼	23⅝	52	56,000	Rheem "Air-Film" Condenser			Side	1	Copeland	....	3R42	3	230/208	½	5.5	498
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Royal, Chattanooga—Chattanooga Royal Co., First & Delmar Sts., Chattanooga, Tenn.																	
24AC1*	23⅜	30⅛	28	24,000	5.40	2	1750	Side	1	Tecumseh	2	B21U18	1	....	⅛	....	225
M4011	23	30	33	24,000	5.40	2	1750	Side	1	Tecumseh	2	B21U18	1	....	⅛	....	255
BM-4010-3	24	32	46½	35,000	5.40	3	1750	Side	1	Tecumseh	3	JE300	3	....	⅛	....	385
36AC1-3*	23⅜	30¼	28	35,000	5.40	3	1750	Side	1	Tecumseh	3	JE300	1—3	....	⅛	....	275
60AC1-3*	28⅝	48⅜	32	60,000	11.25	3	4000	Side	1	Tecumseh	5	FB500	1—3	....	(2) ⅛	....	490
*With "EB" added, for commercial use.																	

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Coil Rows Deep	Blower C.f.m.	Blower R.p.m.	Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight
Miami Air—Miami Products, Inc., 22 Ave., N.W., Miami, Okla.																	
208 UC	18	28	22	36,000	R-22	X Valve	—	Temp.	2.4	—	1400	570	⅓	—	D	16x25	105
608 UC	22	40	40	60,000	R-22	X Valve	—	Temp.	2.9	—	2250	880	½	—	D	25x25	212
EBS 2	28	29	29	25,800	R-22	X Valve	—	Temp.	1.8	—	900	895	¼	—	—	—	130
EBS 3	28	29	29	40,200	R-22	X Valve	—	Temp.	2.4	—	1400	570	⅓	—	—	—	150
EBS 5	28	29	29	62,700	R-22	X Valve	—	Temp.	2.9	—	2250	880	½	—	—	—	160
Moncrief—The Henry Furnace Co., Medina, Ohio																	
DXO-21	12½	15½	15½	21,800‖	R-12	X Valve	Var.	Temp. Opt.	3.1	2	800	—	—	—	—	—	251
DXO-32	15	18½	18½	36,800‖	R-22	X Valve	Var.	Temp. Opt.	5.0	2	1200	—	—	—	—	—	401
DXO-52	17½	27	16½	55,200‖	R-22	X Valve	Var.	Temp. Opt.	6.8	2	1750	—	—	—	—	—	507
H-DXH-2	18½	34⅝	10	21,800	R-12	X Valve	Var.	Temp. Opt.	2.4	2	800	—	—	—	—	—	497
H-DXH-32	21⅝	31	10	36,600	R-22	X Valve	Var.	Temp. Opt.	3.3	2	1200	—	—	—	—	—	567
H-DXH-52	21⅝	43	10	57,100	R-22	X Valve	Var.	Temp. Opt.	5.0	2	2000	—	—	—	—	—	667
DXR-322	15	23½	33	36,000	R-22	X Valve	Var.	Temp. Opt.	3.3	3	1200	—	—	—	—	—	1067
DXR-522	16	30	38	56,500	R-22	X Valve	Var.	Temp. Opt.	5.0	3	2000	—	—	—	—	—	1357
H-BC-32	22	28	26	34,000**	R-22	X Valve	Var.	Temp. Opt.	3.3	3	1200	—	⅛	1	D	20x25	1907
H-BC-52	28	38	31	53,000**	R-22	X Valve	Var.	Temp. Opt.	5.0	3	2000	—	⅛	2	D	20x30	2707
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.																	
MBC-200	16⅝	32¼	30	—	R-22	—	—	Temp.	2.14	3	800	1050	—	1	D	27x16x1	186
MBC-300	16⅝	32¼	30	—	R-22	—	—	Temp.	2.5‡	4	1200	1050	—	1	D	27x16x1	213
MBC-500	22	38	36	—	R-22	—	—	Temp.	4.5‡	3	2000	1775	—	2	D	20x16x1	333
MRA-200A	13	— Varies —		—	R-22	—	—	Temp.	—	—	800†	—	—	—	—	—	63
MRA-300A	17	— Varies —		—	R-22	—	—	Temp.	—	—	1200†	—	—	—	—	—	73
MRA-300V	17	26⅝*	7	—	R-22	—	—	Temp.	—	—	800†	—	—	—	—	—	48
MRA-300V	19	26⅝	7	—	R-22	—	—	Temp.	—	—	1200†	—	—	—	—	—	56
†Blower not furnished, c.f.m. coil requires.																	
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 1, Wis.																	
917-300	22¾	28¼	41	22,000	R-22	X Valve	—	Temp.	2.0	3	720-1080	Var.	½	2	D	16x20	200
917-300	22¾	28¼	41	34,000	R-22	X Valve	—	Temp.	3.3	3	1190-1350	Var.	¾	2	D	16x20	220
917-400	22¾	38	41⅝	45,000	R-22	X Valve	—	Temp.	4.5	3	1320-2100	Var.	¾	2	D	20x20	230
917-500	23¼	38	41⅝	50-56,000	R-22	X Valve	—	Temp.	4.5	4	1910-2230	Var.	¾	2	D	20x20	240
917-750	26¼	43	51¼	80,000	R-22	X Valve	—	Temp.	5.7	4	2810-3500	Var.	1	4	D	16x20	400
919-2†	15⅝	20¼	18⅝	22,000	R-22	X Valve	—	Temp.	2.22	3	—	—	—	—	—	—	—
919-3†	16	20¼-28½	21⅝	34,000	R-22	X Valve	—	Temp.	3.28	3	—	—	—	—	—	—	—
919-4†	18½	30¼	21⅝	45,900	R-22	X Valve	—	Temp.	4.17	3	—	—	—	—	—	—	—
919-5†	18¼	30¼	21⅝	50-56,000	R-22	X Valve	—	Temp.	5.00	3	—	—	—	—	—	—	—
†For use with low-boy furnaces. Also available in varying cabinet dimensions for high-boy (921) and counterflow (922) and horizontal flow coil (900) for duct installations.																	
Northern-Aire—Great Northern Mfg. Co., 1056 N. Wood St., Chicago, Ill.																	
S	18	17⅜	23¼	—	R-22	X Valve	6	—	2.0	4	800‡	—	—	—	—	—	82*
S	18	17⅜	23¼	—	R-22	X Valve	6	—	2.9	4	1200‡	—	—	—	—	—	86*
S	30¼	30	33	—	R-22	X Valve	10	—	4.2	4	2000‡	—	—	—	—	—	106*
S—Single 45° evaporators. Also available in A coil, and flat coils for counterflow. ‡Blower not furnished, c.f.m. coil requires.																	
Payne—The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.																	
240 VC	18½	16½	18⅝	23,000	R-22	X Valve	—	—	2.19	2	850	—	—	—	—	—	60
360 VC	18½	24½	18⅝	34,000	R-22	X Valve	—	—	3.65	3	1275	—	—	—	—	—	60
480 VC	18½	28½	18⅝	47,000	R-22	X Valve	—	—	4.38	3	1750	—	—	—	—	—	75
30 VC	18½	30¼	18⅝	31,000	R-500	X Valve	—	—	3.92	3	1150	—	⅛	1	D	25x20x1	80
40 VC	18½	34¼	18⅝	42,000	R-12	X Valve	—	—	3.65	3	1500	—	¼	2	D	16x20x1	60
50 VC	18½	38¼	18⅝	53,000	R-500	X Valve	—	—	4.38	3	1900	—	⅓	2	D	20x25x1	90
60 VC	18½	38¼	18⅝	63,000	R-500	X Valve	—	—	5.63	3	2260	—	½	1	D	25x25x1	75
75 H†	30	54⅝	14⅜	76,000	R-500	X Valve	—	—	8.63	2	2650	—	½	4	P	14x28x1	130
†Horisontal air flow.																	
Perfection—Perfection Industries, Div. of Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																	
PAR20	16½	14	18	22,000	R-22	Cap.	....	....	1.54	2	....	....	....	....	....	....	....
PAR31	15½	17½-25	19	35,000	R-22	X Valve	....	....	2.71	2	....	....	....	....	....	....	....
PAR31	18⅝	21½-23½	19	57,000	R-22	X Valve	....	....	4.12	3	....	....	....	....	....	....	....
PA83C*	24	49	61¼	97,500	R-22	X Valve	....	....	4.82	6	3000	....	⅝	2	D	16x22, 20x22¼	90
PA103C*	24	59	61¼	135,000	R-22	X Valve	....	....	6.32	6	4000	....	1	2	D	22x22	100
PA153C*	24	72	61¼	191,000	R-22	X Valve	....	....	9.65	6	6000	....	1½	3	D	22x22	135
PA183C	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
PA203C	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
*Horisontal.																	
Permaglas—A. O. Smith Corp., P. O. Box 28, Kankakee, Ill.																	
EU-20	18½	22	17½	18,200	R-22	X Valve	Holding	Temp.	2.33	2	....	....	....	....	....	....	90
EU-34	18½	22	17½	22,800	R-22	X Valve	Holding	Temp.	2.33	3	....	....	....	....	....	....	93
EU-36	18½	22	17½	33,300	R-22	X Valve	Holding	Temp.	2.72	3	....	....	....	....	....	....	97
EU-60	22½	28½	20	56,000	R-22	X Valve	Holding	Temp.	4.12	3	....	....	....	....	....	....	58
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rangaire—Cobell Industries, Inc., Cleburne, Texas																	
C2A	15½	20	22	26,700	R-22	X Valve	....	Temp.	3	2	800	....	....	....	....	....	85
C3A	18½	20½	22½	38,700	R-22	X Valve	....	Temp.	3	3	1200	....	....	....	....	....	89
C4A	18½	23½	23	58,700	R-22	X Valve	....	Temp.	4	3	1600	....	....	....	....	....	98
C5A	17⅝	22⅝	28	64,700	R-22	X Valve	....	Temp.	5	3	2000	....	....	....	....	....	94
C7.5A	18½	29	22	94,300	R-22	X Valve	....	Temp.	7.5	3	3000	....	....	....	....	....	110
C2CF	16	23	25	26,700	R-22	X Valve	....	Temp.	3	2	800	....	....	....	....	....	88
C3CF	16	23	25	38,700	R-22	X Valve	....	Temp.	3	3	1200	....	....	....	....	....	72
C5CF	20½	28	30	64,700	R-22	X Valve	....	Temp.	5	3	2000	....	....	....	....	....	110
C2D	19	27½	7½	26,700	R-22	X Valve	....	Temp.	3	3	800	....	....	....	....	....	37
C3D	19	36½	7½	38,700	R-22	X Valve	....	Temp.	3	3	1200	....	....	....	....	....	55
C4D	27	33	7½	58,700	R-22	X Valve	....	Temp.	4	3	1600	....	....	....	....	....	66
C5D	27	39	7½	64,700	R-22	X Valve	....	Temp.	5	3	2000	....	....	....	....	....	75
C7.5D	27	48	7½	94,300	R-22	X Valve	....	Temp.	6.5	4	3000	....	....	....	....	....	107
C10D	33	50½	7½	131,500	R-22	X Valve	....	Temp.	8.7	4	4000	....	....	....	....	....	145
RCA Whirlpool—Whirlpool Corp., St. Joseph, Mich.																	
EBA-720	11⅝	16⅝	21½	19,500	R-22	Cap.	Holding	Temp.	2.2	3	800	....	....	....	....	....	25
EBA-734	15⅝	19⅝	21½	34,000	R-22	Cap.	Holding	Temp.	3.1	3	1200	....	....	....	....	....	31
ECA-734	16	22	22½	34,000	R-22	Cap.	Holding	Temp.	3.1	3	1200	....	....	....	....	....	52
ECU-734	18⅝	26⅝	10	33,500	R-22	Cap.	Holding	Temp.	2.75	3	1200	....	....	....	....	....	36
EBA-760	20	21½	26½	60,000	R-22	Cap.	Holding	Temp.	5.4	3	2000	....	....	....	....	....	47
ECA-760	23	22	28⅝	60,000	R-23	Cap.	Holding	Temp.	5.4	3	2000	....	....	....	....	....	91
ECU-760	18⅝	40½	10	57,500	R-22	Cap.	Holding	Temp.	4.5	3	2000	....	....	....	....	....	53
RE-7200-3	27½	24½	37½	19,500	R-22	Cap.	2.5	Temp.	2.11	3	1000	1050	⅓	2	D	12x24	100
RE-7300-3	27½	24½	37¼	33,500	R-22	Cap.	4.2	Temp.	2.54	4	1200	1060	½	2	D	12x24	109
RE-7500-3	33¼	39½	42	57,500	R-22	Cap.	8.3	Temp.	4.13	4	2000	Var.	¾	2	D	12x36	184
Rheemaire—Rheem Mfg. Co., 7600 S. Kedzie Ave., Chicago 52, Ill.																	
180E-200C	16⅞	16½	19⅜	22,000	R-22	Cap.	....	Temp.	2.11	3	800	....	....	....	....	....	28
RA30CU	18

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Stewart-Warner—Stewart-Warner Corp., Heating & Air Conditioning Div., Lebanon, Ind.																	
RC-P-2	...	...	...	24,000	3.4	3	...	Side	1	Tecumseh	2	B21U18	1	230	¼	...	...
RC-M-2	22	30¾	42½	24,000	3.4	3	...	Side	1	Tecumseh	2	JB200	1	230	¼	...	300*
RC-M-3	22	30¾	42½	35,000	3.4	4	...	Side	1	Tecumseh	3	JE300	1–3	208/220/230	⅓	...	320*
RC-M-4	29⅝	39⅜	55¾	47,000	6.0	4	...	Side	1	Tecumseh	4	PFB400	1–3	208/220/230	(2) ¼	...	615*
RC-M-5	29⅝	39⅜	55¾	58,000	6.0	6	...	Side	1	Tecumseh	5	FB500	1–3	208/220/230	(2) ¼	...	630*
RC-A-2	22	30¾	42½	24,000	3.4	3	...	Side	1	Tecumseh	2	JE200	1	230	(2) 1/12	...	355*
RC-A-3	22	30¾	42½	35,000	3.4	4	...	Side	1	Tecumseh	3	JE300	1–3	208/220/230	(2) 1/12	...	370*
RC-A-4	29⅛	39⅜	55⅞	47,000	6.0	4	...	Side	1	Tecumseh	4	PFB400	1–3	208/220/230	(2) ⅓	...	690*
RC-A-5	29⅛	39⅜	55⅞	58,000	6.0	6	...	Side	1	Tecumseh	5	FB500	1–3	208/220/230	(2) ¼	...	690*
RC-A-7½	29⅛	39⅜	55⅞	84,000	5.8	8	...	Side	1	Copeland	7½	MRG-750	3	208/220	(2) ½	...	775*
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Rating (B.t.u.h.)	Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Air Discharge	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Fan Motor Hp.	Kw. Input	Net Weight
Westinghouse—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.																	
AU-301A	26⅛	31½	31½	32,000	5.7	2	1800	Top	1	Tecumseh	—	—	1	230	½	—	230
AU-401A	27⅛	31½	36½	32,000	7.0	3	2900	Top	1	Tecumseh	—	—	1—3	230/208/220	½	—	330
AU-501	31⅝	36⅛	36⅝	45,000	11.3	2	4500	Top	1	Westinghouse	—	CLS-41	1—3	230/208/220	½	—	530
AU-452A	40¼	36	29	36,500	6.8	3	2900	Top	1	Westinghouse	—	CLS-31	1—3	230/208/220	½	—	560
AU-462B	40¼	51½	30	51,500	10.4	3	4150	Top	1	Westinghouse	—	CLS-51	1—3	230/208/220	¾	—	775
AU-502A	50¼	51½	30	74,500	13.4	3	4900	Top	1	Westinghouse	—	CLS-81	3	208/230	1	—	930
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wethermatic—The Williamson Co., 3500 Madison Rd., Cincinnati 9, Ohio																	
7130-02-3002	23¾	48½	21½	24,000	6.25	2	2800	Side	1	B-W	2	H490-TA	1	230	½	—	329
7130-25-3002	23¾	48½	21½	30,000	6.25	2	2800	Side	1	Tecumseh	3	JE300	1	230	½	—	374
7130-03-3001	23¾	48½	21½	36,000	6.25	3	4320	Side	1	Tecumseh	3	JE300	1—3	230/208/220	½	—	396
7130-04-3002	23¾	53¾	28⅝	48,000	6.25	4	5760	Side	1	Tecumseh	4	PFE-400	1—3	230/208/220	½	—	586
7130-05-3001	34	54	30	60,000	10.5	3	7200	Side	1	Tecumseh	5	FE-500	1—3	230/208/220	(2) ½	—	700
7140-07-3002	41	67	32	90,000	15	3	10800	Side	1	Copeland	7½	MRG750	3	208/220	(2) ½	—	854
7140-10-3002	41	67	32	120,000	15	4	14400	Side	1	Copeland	10	9RS-1000	3	208/220	(2) 1	—	1100
Wizard—Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.																	
6JF1951/53	23⅜	30¼	27⅞	35,000	3.65	3	1700	Side	1	Tecumseh	3	JE300	1—3	230	½	3.66	360
6JF1959/60	23⅜	30⅜	27⅞	35,000	3.65	3	1700	Side	1	Tecumseh	3	JE300	1—3	230	½	3.66	360
6JF1961/62	23⅜	30⅜	27⅞	35,000	3.65	3	1700	Side	1	Tecumseh	3	JE300	1—3	230	½	3.66	360
6JF1963/64	23⅜	30⅜	27⅞	35,000	3.65	3	1700	Side	1	Tecumseh	3	JE300	1—3	230	½	3.66	360
6JF1974/79	26⅝	48⅜	31⅞	47,200	7.73	3	4000	Side	1	Tecumseh	4	PFB400	1—3	230	(2) ½	6.06	445
6JF1980/81	26⅝	48⅜	31⅞	47,200	7.73	3	4000	Side	1	Tecumseh	4	PFB400	1—3	230	(2) ½	6.06	445
6JF1982/83	26⅝	48⅜	31⅞	47,200	7.73	3	4000	Side	1	Tecumseh	4	PFB400	1—3	230	(2) ½	6.06	445
6JF1990/91	26⅝	48⅜	31⅞	60,600	7.73	3	4000	Side	1	Tecumseh	5	FB500	1—3	230	(2) ½	7.28	455
6JF1992/93†	26⅝	48⅜	31⅞	60,600	7.73	3	4000	Side	1	Tecumseh	5	FB500	1—3	230	(2) ½	7.28	455
6JF1994/99‡	26⅝	48⅜	31⅞	60,600	7.73	3	4000	Side	1	Tecumseh	5	FB500	1—3	230	(2) ½	7.28	455
Worthington—Worthington Corp., Ampere Station, East Orange, N. J.																	
RAC-300	30	40½	28⅛	22,400	4.12	3	2200	Top/Side	1	Worthington	2	2JF2	1	208/220/230	½	3.05	525
RAC-410	38½	42	28⅛	33,000*	6.32	3	3800	Top/Side	1	Worthington	3	2JF3	1—3	208/220/230/380	½	4.62	595
RAC-610	38½	42	28⅛	49,800*	8.27	4	5300	Top/Side	1	Worthington	5	2JF3	1-3-3	208/220/380/440†	1	7.25	722
RAC-810	41¼	67	36⅛	82,000*	12.50	5	6500	Top/Side	1	Worthington	7½	2JF5	3—3	208/220/380/440†	1½	10.9	937
RAC-1010	48⅝	67	31⅝	99,700*	15.6	4	8100	Top/Side	1	Worthington	10	2JF5	3	208/220/380/440	2	13.23	1200
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wright-Temp—Wright-Temp Mfg. Co., Inc., 2902 W. Thomas Rd., P. O. Box 11247, Phoenix, Ariz.																	
2RC1	25¼	34	30	23,200	4.2	4	1250	Side	1	Tecumseh	2	JB200	1	208/230	½	—	290
3AC1-3	27½	42	33	35,400	5.7	4	3300	Side	1	Tecumseh	3	JE300	1	208/230	½	—	382
4AC1-3	45	37½	34	47,600	9.8	3	4800	Side	1	Tecumseh	4	PFB400	1—3	208/230	½	—	530
5AC1-3	57¼	40	40	57,600	12.1	3	6000	Side	1	Tecumseh	5	PFB300	1—3	208/230	¾	—	681
7RC3	39	84	40	82,000	18.3	3	9000	Side	1	Copeland	7½	MRG750	3	208/230	(2) ½	—	1040
York Twinliner Champion—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York Pa.																	
HA36	38⅝	34⅞	24½	37,000	(2) 3.12	3	2700	Top	2	York	—	F3654P	1	208/230	½	—	305
HA48	45⅛	34⅞	24½	47,000	(4) 2.26	3	3200	Top	2	York	—	G3672P	1	208/230	½	—	319
HA72	45⅛	69⅛	24½	67,000	(4) 3.06	3	5400	Top	2	York	—	H3780H	1—3	208/230	¾	—	465
CA50	23	41⅝	36	53,000	7.3	3	4200	Side	1	York	—	501	1—3	230/208/220/440	1	—	675
CA75	33½	46	36⅝	86,000	11.2	3	6000	Side	1	York	—	TA682	3	208/220/440	1½	—	865
CA60	53⅜	36	36	60,000	(2) 4.5	3	4300	Top	1	York	—	SA482	3	208/220/440	—	—	625
CA90	65⅛	36	36	90,000	(2) 6.7	3	6000	Top	1	York	—	TA682	3	208/220/440	1	—	740
CA120	54	72	36	122,000	(2) 9.0	3	8600	Top	2	York	—	SA482	3	208/220/440	(2) ½	—	1225
CA180	66¾	72	36	188,000	(3) 13.6	3	12000	Top	2	York	—	TA682	3	208/220/440	(2) 1	—	1460
CW301	27½	38¼	35¼	44,000	—— Water Cooled ——				1	York	—	HA380	1—3	230/208/220/440	—	—	445
CW501	27½	38¼	35¼	68,000	—— Water Cooled ——				1	York	—	JA482	3	208/220/440	—	—	453
CW751	27½	38¼	35¼	99,500	—— Water Cooled ——				1	York	—	KA682	3	208/220/440	—	—	575

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (B.t.u.h.)	Refrigerant No.	Refrigerant Control	Charge (Lbs.)	Control	Coil Face Area (Sq. Ft.)	Coil Rows Deep	Blower C.f.m.	Blower B.p.m.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions	Net Weight
Westinghouse—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.																	
DXV-33	15⅝	20	20⅝	—	—	X Valve	—	Temp.	2.8	3	—	—	—	—	—	—	—
DXV-44	15⅝	21¼	18⅝	—	—	X Valve	—	Temp.	4.25	3	—	—	—	—	—	—	—
DXV-64	20⅝	28⅝	23⅝	—	—	X Valve	—	Temp.	5.65	3	—	—	—	—	—	—	—
DXH-33	13½	34⅝	10	—	—	X Valve	—	Temp.	2.43	3	—	—	—	—	—	—	—
DXH-43	16	42⅝	10	—	—	X Valve	—	Temp.	3.62	3	—	—	—	—	—	—	—
DXH-63	21	49⅝	10	—	—	X Valve	—	Temp.	4.66	3	—	—	—	—	—	—	—
DXF-33	23	25½	36	—	—	X Valve	—	Temp.	1.87	3	800	—	½	1	D	30x20	285
DXF-43	23	34	36	—	—	X Valve	—	Temp.	2.29	3	1200	—	¾	2	D	30x16	305
DXF-53	26	41	41½	—	—	X Valve	—	Temp.	4.03	3	2000	—	⅞	2	D	30x20	395
DXF-63	28	41	41⅝	—	—	X Valve	—	Temp.	4.41	3	2600	—	¾	2	D	30x20	395
Wethermatic—The Williamson Co., 3500 Madison Rd., Cincinnati 9, Ohio																	
6224-02	17⅛	22½	26	24,000	R-22	X Valve	—	Temp.	2.7	2	700*	—	—	—	—	—	—
6224-25	17⅛	22½	26	30,000	R-22	X Valve	—	Temp.	3.3	3	875*	—	—	—	—	—	—
6224-03	17⅛	22½	26	36,000	R-22	X Valve	—	Temp.	3.3	3	1050*	—	—	—	—	—	—
6124-04	21	34	32	48,000	R-22	X Valve	—	Temp.	4.7	4	1400*	—	—	—	—	—	—
6124-05	21	34	32	60,000	R-22	X Valve	—	Temp.	4.7	4	1750*	—	—	—	—	—	—
H6143-07	36¼	46	7¾	90,000	R-22	X Valve	—	Temp.	6.3	4	2625*	—	—	—	—	—	—
H6143-10	36¼	46	9¼	120,000	R-22	X Valve	—	Temp.	6.3	5	3500*	—	—	—	—	—	—
*Required minimum c.f.m.																	
Wizard—Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.																	
6JF1951/53	17¼	30⅜	23	35,000	R-22	Cap.	4⅝	Temp.*	3.1	3	1000†	—	—	—	—	—	85
6JF1959/60†	18⅝	25⅝	10	35,000	R-22	Cap.	4⅝	Temp.*	2.75	3	1000†	—	—	—	—	—	39
6JF1961/62†	20½	28	28	35,000	R-22	Cap.	4⅝	Temp.*	2.75	3	1000	1075	⅝	1	D	24x12x1	103
6JF1963/64†	21½	25	25⅝	35,000	R-22	Cap.	4⅝	Temp.*	2.75	3	1000	1075	⅛	—	—	—	101
6JF1974/79	23	26⅝	22	47,200	R-22	Cap.	7 3/16	Temp.*	5.25	3	3000†	—	—	—	—	—	87
6JF1980/81†	18⅝	29⅝	10	47,200	R-22	Cap.	7 3/16	Temp.*	4.5	3	3000†	—	—	—	—	—	85
6JF1982/83†	20½	40	28	47,200	R-22	Cap.	7 3/16	Temp.*	4.5	3	1600	1075	⅛	2	D	18x12x1	200
6JF1990/91	23	28⅝	22	60,600	R-22	Cap.	9¾	Temp.*	6.25	3	3000†	—	—	—	—	—	97
6JF1992/93†	18⅝	29⅝	10	60,600	R-22	Cap.	9¾	Temp.*	4.5	3	3000†	—	—	—	—	—	85
6JF1994/99‡	20½	40	28	60,600	R-22	Cap.	9¾	Temp.*	4.5	3	3000	1075	⅛	2	D	18x12x1	348
*ARI ratings.																	
Worthington—Worthington Corp., Ampere Station, East Orange, N. J.																	
CFC-400	22⅜	26⅝	53⅜	33,000*	R-22	—	2.5	—	3.3	3	1200	—	⅛	2	D	16x20	320
CFC-600	23¼	36⅛	53⅝	49,800*	R-22	—	4.5	—	4.5	4	3000	—	⅛	2	D	20x20	340
CFC-800	30½	37⅝	61⅛	66,000*	R-22	—	6.0	—	5.7	4	4000	—	1	4	D	16x20	430
CFC-1000	27⅝	60¼	54	99,700*	R-22	—	8.5	—	9.25	4	4000	—	2	6	P	20x36	540
RXE-200	23¼	38	47⅝	22,400	R-13	—	2.0	—	2.71	3	800	—	⅛	2	D	20x16, 20x20	284
RXE-400	22¼	38	47⅝	33,000*	R-22	—	2.5	—	3.44	3	1200	—	—	2	D	20x16, 20x20	369
RXE-600	27⅝	36	52¼	49,800*	R-22	—	4.5	—	4.09	4	3000	—	⅛	2	D	20x16, 20x20	539
RXE-800	27⅝	46	56⅛	82,000*	R-22	—	6.0	—	6.25	4	3000	—	⅛	2	P	23⅝x23⅝	665
*ARI ratings.																	
Wright-Temp—Wright-Temp Mfg. Co., Inc., 2902 W. Thomas Rd., P. O. Box 11247, Phoenix, Ariz.																	
2REV	17½	21	21	23,200	R-22	X Valve	2	Temp.	3.2	3	800	—	—	—	—	—	77
3REV	17½	21	21	35,400	R-22	X Valve	2	Temp.	3.2	3	1300	—	—	—	—	—	77
4REV	19	16	18	47,600	R-22	X Valve	2	Temp.	4	3	1600	—	—	—	—	—	102
5REV	19½	22⅝	30½	57,600	R-22	X Valve	2	Temp.	4.4	4	2000	—	—	—	—	—	118
Also attic coils—Horizontal and vertical air handlers for each model shown.																	
York Twinliner Champion—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York Pa.																	
36U	19	21	29	—	R-22	Cap.	—	Temp.	3.12	4	1200	—	—	—	—	—	48
48U	19	30	29	—	R-22	Cap.	—	Temp.	4.12	4	1600	—	—	—	—	—	60
72U	25½	29	29	—	R-22	Cap.	—	Temp.	6.86	4	2200	—	—	—	—	—	84
EB60	23	41⅝	36	—	R-22	X Valve	—	—	5.25	3	2000	—	½	2	D	18x23½x1	331
EB90	32½	46	38⅝	—	R-22	X Valve	—	—	8.75	3	3000	—	⅝	4	D	16x20x1	380
EB120*	35¼	63⅛	36	—	R-22	X Valve	—	—	10.85	3	4000	—	1½	4	D	12x30½x1	487
EB180*	36¼	81	36⅝	—	R-22	X Valve	—	—	13.02	4	6000	—	2	6	D	12x30½x1	970
3UX	18	30	19	—	R-22	X Valve	—	—	3.47	3	1200	—	—	—	—	—	93
5UX	32½	18¼	27	—	R-22	X Valve	—	—	5.00	3	2000	—	—	—	—	—	113
H-75DX	33⅝	46	9¾	—	R-22	X Valve	—	—	8.75	3	3000	—	—	—	—	—	132
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*Vertical arrangement.																	

Heat Pumps

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heat Source	Supplementary	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Refrigerant No. (12, 22)	Refrigerant Charge (Lbs.)	Factory Charged?
ACI-H—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.																	
ACI-H-30	66	25½	25½	36,000	—	46,000	Water	—	1	Copeland	3	LRH-300	1-3-3	220/230	R-12	11	Yes
ACI-H-60	72	44⅝	26⅝	61,000	—	80,000	Water	—	1	Copeland	5	MRF-500	1-3-3	220/230	R-12	13	Yes
ACI-H-75	71	51	30¼	93,000	—	120,000	Water	—	1	Copeland	7½	9RS-750	3—3	220	R-12	16	Yes
ACI-H-100	75	57	30¼	121,000	—	160,000	Water	—	2	Copeland	(2) 5	MRF-500	1-3-3	220/230	R-12	26	Yes
ACI-H-150	75	70	21¼	182,000	—	230,000	Water	—	2	Copeland	(3) 7½	9RS-750	3—3	220	R-12	33	Yes
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																	
1169-4	27½	45	76⅝	31,000	10.3	68,300* 99,700†	Air	Electric	1	Tecumseh	3	PJE300	1	230	R-22	5.9	Yes
*Includes 13.8 KW supplemental electric heater. †Includes 23 KW supplemental electric heater. ‡Cooling. ‡Approximate.																	
Amana—Amana Refrigeration, Inc., Amana, Iowa																	
PKH224-1	21	30	40	24,000‡	7.2	22,800†	Air	Acces.	1	Tecumseh	2	B21U18	1	230	R-22	3.7	Yes
PKH336-1	25	34	45	36,000‡	11.0	33,300†	Air	Acces.	1	Tecumseh	3	PJE300	1	230	R-22	6.2	Yes
PKH448T-1	31	40	64	48,000‡	14.0	43,600†	Air	Acces.	2	Tecumseh	2	B21U18	1	230	R-22	7.2	Yes
PKH560T-1	31	40	70	61,000‡	17.0	57,300†	Air	Acces.	2	Tecumseh	3	PJG300	1	230	R-22	9.7	Yes
‡Cooling rating conditions: 95° d.b., 75° w.b. outside; 80° d.b., 67° w.b. inside. †Heating rating conditions: 35° d.b., 33.5° w.b. outside; 70° d.b. inside. †At cooling conditions.																	
APCo—Addison Products Co., Addison, Mich.																	
PA22H-1	23	29⅞	30½	22,000*	—	22,000†	Air	Electric	1	Tecumseh	2	B21U18	1	230	R-22	2# 14	Yes
PA30H-1	26	32	49⅝	30,000*	—	27,000†	Air	Electric	1	Tecumseh	3	PJG300	1	230	R-22	5# 3	Yes
PA40H-4	26	32	49⅞	40,000*	—	38,000†	Air	Electric	2	Tecumseh	2	B21U18	1	230	R-22	6# 10	Yes
37ACH	38⅝	36¼	37⅜	34,000*	—	32,000†	Air	Electric	1	Tecumseh	3	PJE300	1	230	R-22	9#	Yes
37UBH	21½	25	25⅞	—	—	—	—	—	—	—	—	—	—	—	—	—	—
47ACH	28⅝	48⅜	31⅞	44,000*	—	42,900†	Air	Electric	1	Tecumseh	4	PFB400	1	230	R-22	11# 10	Yes
47UBH	26⅝	25	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*Cooling rating conditions: 95°—80°/67°. †Heating rating conditions: 70°/45°. ‡Quick disconnect models only. Sweat fitting equipped models have 16 oz. holding charge.																	
Bard—Bard Mfg. Co., Bryan, Ohio																	
PA22H-1	23	29⅞	30½	22,000	—	22,000†	Air	Electric	1	Tecumseh	2	B21U18	1	230	R-22	2# 14	Yes
PA30H-1	26	32	49⅝	30,000	—	27,000†	Air	Electric	1	Tecumseh	3	PJE300	1	230	R-22	5# 3	Yes
PA40H-4	26	32	49⅞	40,000	—	38,000†	Air	Electric	2	Tecumseh	2	B21U18	1	230	R-22	6# 10	Yes
†Heating rating conditions: 70° d.b. inside temp. at 45° F. outside temp.																	
Bonair—Peerless Products Co., 23rd St. & Sedgley Ave., Philadelphia 32, Pa.																	
PA20H	23	30	30	20,000	—	17,500	Air	Electric	1	Tecumseh	—	—	1	230	R-22	—	—
PA32H	24	32	46	30,500	—	32,000	Air	Electric	1	Tecumseh	—	—	1	230	R-22	—	—
PA40H	24	32	60	40,000	—	35,000	Air	Electric	2	Tecumseh	—	—	1	230	R-22	—	—
Brown—Brown Products Corp., 1090 Springfield Rd., Union, N. J.																	
PA20H	23	30½	29⅞	20,000‡	—	17,500†	Air	Electric	1	Tecumseh	—	—	1	230	R-22	—	Yes
PA32H	24	46½	32	30,500‡	—	32,000†	Air	Electric	1	Tecumseh	—	—	1	230	R-22	—	Yes
PA40H	24	59½	32	40,000‡	—	35,000†	Air	Electric	1	Tecumseh	—	—	1	230	R-22	—	Yes
‡Cooling rating conditions: 95° outside ambient. †Heating rating conditions: 45° outside ambient.																	

Heat Pumps

Model No.	Outside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Inside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Control Temp.†	Control Automatic Change Over?	Air Filters No.	Air Filters Type	Air Filters Dimensions (In.)	Water Usage (G.p.m./Ton)	Kw. Input Total	Net Weight
ACI-H—American Coils Co., R-524 Lakewood Rd., Farmingdale, N. J.																
ACI-H-30	—	—	—	—	2.7	5	1200	½	Yes	Yes	1	Permanent	14⅛x25⅝	1½—3	—	784
ACI-H-60	—	—	—	—	4.4	5	2000	½	Yes	Yes	1	Permanent	18⅛x34⅝	1½—3	—	925
ACI-H-75	—	—	—	—	6.7	5	3000	(2) ½	Yes	Yes	2	Permanent	19⅛x35⅛	1½—3	—	1167
ACI-H-100	—	—	—	—	9.0	5	4000	(2) ½	Yes	Yes	2	Permanent	22⅛x28⅛	1½—3	—	1561
ACI-H-150	—	—	—	—	13.5	6	6000	(2) ⅝	Yes	Yes	3	Perm.	2—25¼x23¼ 14⅛x23¼	1½—3	—	2100
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																
1169-4	4.25	4	1835	½	3.21	3	1200	½	Yes	Yes	—	—	—	—	5.1‡	6102
Amana—Amana Refrigeration, Inc., Amana, Iowa																
PKH224-1	2.64	4	1200	½	1.88	4	650-930	Same	—	Yes	—	—	—	—	3.4†	295
PKH336-1	3.58	5	1920	½	2.67	4	1000-1380	½	—	Yes	—	—	—	—	5.1†‡	434
PKH448T-1	5.00	5	2800	(2) ½	3.67	4	1550-1830	½	—	Yes	—	—	—	—	6.9†‡	622
PKH560T-1	6.25	5	3550	(2) ½	4.67	4	1900-2110	¾	—	Yes	—	—	—	—	9.2†‡	728
APCo—Addison Products Co., Addison, Mich.																
PA22H-1	3.3	3	1650	½	1.9	3	720	Same	Yes	Yes	—	—	—	—	3.1	345
PA30H-1	4.9	4	2350	½	2.8	3	1180	½	Yes	Yes	—	—	—	—	4.65	416
PA40H-4	4.9	4	2350	¼	2.8	4	1380	½	Yes	Yes	—	—	—	—	5.9	480
37ACH	6.8	3	2000	½	—	—	—	—	Yes	Yes	—	—	—	—	4.7	340
37UBH	—	—	—	—	2.5	4	1100	½	—	—	—	—	—	—	—	110
47ACH	7.7	3	4000	½	—	—	—	—	Yes	Yes	—	—	—	—	6.6	470
47UBH	—	—	—	—	3.8	3	1600	½	—	—	—	—	—	—	—	132
Bard—Bard Mfg. Co., Bryan, Ohio																
PA22H-1	3.25	3	1850	—	1.87	3	720	½	Yes	Yes	—	—	—	—	3.1	365
PA30H-1	4.86	4	2350	½	2.81	3	1180	¾	Yes	Yes	—	—	—	—	4.65	414
PA40H-4	4.86	4	2350	½	2.81	4	1380	¾	Yes	Yes	—	—	—	—	5.9	480
Bonair—Peerless Products Co., 23rd St. & Sedgley Ave., Philadelphia 32, Pa.																
PA20H	—	—	—	½	—	—	700	Same	Yes	Yes	—	Perm. or Disp.	—	—	—	345
PA32H	—	—	—	½	—	—	1180	½	Yes	Yes	—	Perm. or Disp.	—	—	—	435
PA40H	—	—	—	½	—	—	1380	½	Yes	Yes	—	Perm. or Disp.	—	—	—	575
Brown—Brown Products Corp., 1090 Springfield Rd., Union, N. J.																
PA20H	—	—	—	½	—	—	700	Same	—	—	—	—	—	—	2.7	340
PA32H	—	—	—	½	—	—	1180	½	—	—	—	—	—	—	4.65	435
PA40H	—	—	—	½	—	—	1380	½	—	—	—	—	—	—	5.9	575

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heat Source	Supplementary	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Refrigerant No. (12, 22)	Charge (Lbs.)	Factory Charged?	Outside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Inside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Control Automatic Change Over?	Temp.†	Air Filters No.	Type	Dimensions (In.)	Water Usage (G.p.m./Ton)	Kw. Input Total	Net Weight
Clima-Pump—Peerless Corp., 1853 Ludlow Ave., Indianapolis 7, Ind.																																
CPA-384	31½	37¼	37¼	37,000	...	...	Air	Electric	1	Tecumseh	3	PJE300	1—3	230/208/220	R-22	9*	Yes	7.5	3	3200	.20	2.77	3	1200	¼	Yes	Yes	...	Disposable	...	...	...	385
CPA-584	31½	37¼	37¼	62,500	...	...	Air	Electric	1	Tecumseh	5	PFB500	1—3	230/208/220	R-22	12*	Yes	7.5	3	4400	.55	4.33	4	2000	½	Yes	Yes	...	Disposable	...	...	...	550
*Approximate.																																
Clima-Pump—Round Oak Co., Inc. of Indiana, Dowagiac, Mich.																																
CPA-384	31½	37¼	37¼	37,000	...	...	Air	Electric	1	Tecumseh	3	PJE300	1—3	230/208/220	R-22	9*	Yes	7.5	3	3200	.20	2.77	3	1200	¼	Yes	Yes	...	Disposable	...	...	...	385
CPA-584	31½	37¼	37¼	62,500	...	...	Air	Electric	1	Tecumseh	5	PFB500	1—3	230/208/220	R-22	12*	Yes	7.5	3	4400	.55	4.33	4	2000	½	Yes	Yes	...	Disposable	...	...	...	550
*Approximate.																																
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth, Jackson, Mich.																																
PA22-H	33	29½	30	22,000‡	...	22,000†	Air	Electric	1	Tecumseh	2	B21U18	1	230	R-22	2¼	Yes	3.3	3	1850	¼	2.0	3	720	Same	Yes	Yes	...	...	...	...	2.45	240
PA30-H	26	33	49¾	30,000‡	...	27,000†	Air	Electric	1	Tecumseh	3	PJG300	1	230	R-22	5¼	Yes	4.9	4	2350	¼	2.9	3	1180	¼	Yes	Yes	...	...	...	...	4.65	430
PA40-H	26	33	49¾	40,000‡	...	38,000†	Air	Electric	2	Tecumseh	2	B21U18	1	230	R-22	6¼	Yes	6.9	4	2350	½	2.9	4	1380	½	Yes	Yes	...	...	...	...	5.9	490
HCC-371-H	34	38	32	36,000‡	...	33,900†	Air	Electric	1	Tecumseh	3	PJE300	1	230	R-22	9	No	6.8	3	2000	½	2.6	4	1300	½	Yes	Yes	...	...	...	...	4.52	340
‡Cooling rating conditions: ARI Standard. †Heating rating conditions: 45° outside ambient, 72° inside condition.																																
Coolerator—McGraw-Edison Co., 704 North Clark St., Albion, Mich.																																
RBRA-21	30⅝	31¼	27½	36,000	...	32,500†	Air	Opt.	...	Tecumseh	3	PJE300	1	230	R-22	...	...	4.0	4	2000	¼	...	...	...	...	Yes	Yes	...	...	...	...	3.9†	340
RBER3A	33¼	25¼	26½	36,000	...	32,500†	Air	Opt.	...	...	...	...	...	...	R-22	...	...	2.4	4	1250	½	...	...	...	...	...	...	1	Disposable	16x20	...	...	113
†At 45° F.																																
Cool Heat—Drying Systems Co., 1800 Foster Ave., Chicago 40, Ill.																																
10-3-22	66	64	78	122,500	...	130,000	Air	Electric	1	Copeland	10	9R8-1000	3	230	R-22	30	Yes	9.6	4	5000	2	9.0	4	3000	1	Yes	Yes	4	Disposable	20x25	...	...	2000
15-3-22	66	64	78	175,000	...	180,000	Air	Electric	2	Copeland	7½	MRG-750	3	230	R-22	35	Yes	9.0	6	7000	3	9.0	6	4500	2	Yes	Yes	4	Disposable	20x25	...	...	3500
20-3-22	66	64	90	245,000	...	200,000	Air	Electric	2	Copeland	10	9R8-1000	3	230	R-22	50	Yes	11.25	6	9000	3	11.25	6	6000	3	Yes	Yes	5	Disposable	20x25	...	...	4000
Fedders—Fedders Corp., 58-01 Grand Ave., Maspeth, N. Y.																																
912CH-2	16¼	27	16½	...	3.0	...	Air	...	1	Tecumseh	1	...	1	115	R-22	...	Yes	1.75	3	...	1/10	1.0	3	300	1/10	...	Yes	1	Permanent	10¼x14	...	...	165
912DH-3	16¼	27	16½	...	3.0	...	Air	...	1	Tecumseh	1	...	1	230	R-22	...	Yes	1.75	3	...	1/10	1.0	3	340	1/10	...	Yes	1	Permanent	10¼x14	...	...	165
916CSH-2	16¼	27	19½	...	3.5	...	Air	...	1	Tecumseh	1½	...	1	115	R-22	...	Yes	1.75	4	...	1/10	1.0	4	350	1/10	...	Yes	1	Permanent	10½x14	...	...	180
921DH-3	16¼	27	19½	...	4.6	...	Air	...	1	Tecumseh	2	...	1	230/208	R-22	...	Yes	1.75	4	...	1/10	1.0	4	450	1/10	...	Yes	1	Permanent	10½x16	...	...	190
913FS-3	16¼	27	19¼	...	2.75	...	Air	Yes	1	Tecumseh	1	...	1	230/208	R-22	...	Yes	1.75	4	...	1/10	1.0	4	350	1/10	...	Yes	1	Permanent	10½x14	...	...	184
912DPS-3	16¼	27	16¾	...	3.0	...	Air	Yes	1	Tecumseh	1	...	1	230	R-22	...	Yes	1.75	4	...	1/10	1.0	4	340	1/10	...	Yes	1	Permanent	10½x14	...	...	182
830AH-3/8	20¾	30½	20¾	33,000	...	73,500†	Air	Yes	1	Tecumseh	3	...	1—3	230	R-22	...	Yes	2.8	4	...	½	2.0	4	1130*	½	...	Yes	...	Optional	...	...	...	365
HE936A-3/8	21⅝	37½	44½	36,000	...	72,700†	Air	Yes	1	Tecumseh	3	...	1—3	230	R-22	...	Yes	2.95	4	...	⅛	1.97	4	1240*	⅛	...	Yes	...	Optional	...	...	...	445
HE936A-3/8	21⅝	37½	44½	...	...	...	Air	Yes	1	Tecumseh	2	...	1—3	230	R-22	...	Yes	2.95	3	...	...	1.97	3	...	...	...	Yes	...	Optional	...	...	...	...
†At 20° F. outside temp. *At .3" static pressure.																																
Forston & Lincoln—The Forston Co., 1400 Conti St., Houston 2, Texas																																
PEH-2	20¼	25⅝	29	23,800‡	...	24,380†	Air	Opt.	1	Tecumseh	2	B21U18	1	230	R-22	3½	Yes	2.34	4	1540	(2) 1/25	1.55	4	800	⅛	Yes	Yes	1	Optional	20x10*	...	...	315
PEH-3	20¼	25⅝	29	35,800‡	...	36,902†	Air	Opt.	1	Tecumseh	3	PJE300	1—3	230/220	R-22	5½	Yes	4.0	4	4760	⅛	2.22	4	1230	⅛	Yes	Yes	1	Optional	27x11*	...	...	460
5-PKGHP	31⅞	37½	69	59,000‡	...	66,780†	Air	Opt.	1	Tecumseh	5	PFB500	1—3	230/208/220	R-22	8½	Yes	6.2	3	5000	⅛	4.34	4	2000	⅛	Yes	Yes	1	Optional	29x19*	...	...	980
300R-2-BLSHP	25¼	29½	35½	24,000‡	...	24,300†	Air	Opt.	1	Tecumseh	2	JB300	1—3	230/220	R-22	...	No	4.0	3	4760	⅛	2.10	4	800	⅛	Yes	Yes	1	Optional	16x17*	...	...	530
300R-3-BLSHP	25½	29½	35¼	36,000‡	...	36,830†	Air	Opt.	1	Tecumseh	3	PJE300	1—3	230/208/220	R-22	...	No	4.0	4	4760	⅛	2.30	4	1200	⅛	Yes	Yes	1	Optional	16x17*	...	...	670
500R-5-BLSHP	41⅛	41⅛	36½	60,000‡	...	66,780†	Air	Opt.	1	Tecumseh	5	PFB500	1—3	230/208/220	R-22	...	No	9.0	3	480	⅛	5.30	3	2000-2400	⅛	Yes	Yes	1	Optional	28x24*	...	...	985
750R-7½-BLSHP	41½	41½	36½	90,000‡	...	90,100†	Air	Opt.	1	Copeland	7½	MRG750	3	208/220/440	R-22	...	No	9.0	4	548	⅛	5.30	4	3000-3400	¾	Yes	Yes	1	Optional	28x24*	...	...	985
1000R-10-BLSHP	53¼	53	36½	120,000‡	...	121,680†	Air	Opt.	1	Copeland	10	9R8-1000	3	208/220	R-22	...	No	16.0	3	528	⅜	7.5	4	4000-4400	¾	Yes	Yes	1	Optional	29x25*	...	...	1075
1500R-15-BLSHP	38⅝	84	60	174,000‡	...	176,432†	Air	Opt.	1	Brunner	15	150HF	3	208/230	R-22	...	No	19.0	4	1056	(2) ⅛	11.66	4	6000	1	Yes	Yes	1	Optional	60x42*	...	...	1760
‡Cooling rating conditions: 95° amb., 80° d.b., 67° w.b. †Heating rating conditions: without supplementary heating; 50° amb., 75° inside. *Optional; depends on return air arrangement when as shown under split-system listing.																																
Frigidaire—Frigidaire Div., General Motors Corp., Dayton, Ohio																																
CBY-300 HP	24⅞	33¼	22¼	36,000‡	10.7	32,000†	Air	Opt.	...	...	...	...	...	...	...	...	...	3.72	3	...	⅛	...	...	1200	⅛	Yes	Opt.	1	Disposable*	16x22	...	.42	165
CUAE-300 HP	27½	48¼	28¼	...	...	...	...	...	1	Frigidaire	...	...	1—3	208/230/230	R-12	...	No	6.5	3	2700	⅛	...	...	...	...	...	...	...	...	...	...	4.0	538
CBY-500 HP	24	42	33¾	60,000‡	18.1	48,000†	Air	Opt.	...	...	...	...	...	...	...	...	...	4.24	4	2000	⅛	...	...	...	...	Yes	Opt.	2	Disposable	20x30	...	.86	230
CUAE-500 HP	37½	62¼	28¼	...	...	...	...	...	1	Frigidaire	...	...	1—3	208/230/230	R-12	...	No	10.4	3	4200	⅛	...	...	...	...	...	...	...	...	...	...	6.0	694
‡Cooling rating conditions: 80° d.b., 67° w.b. inside—95 d.b., 75½ outside—40° evap. temp. †Heating rating conditions: 70° d.b. inside temp., 45° outside temp. Optional heating elements provide up to 66,200 B.t.u.h. for CBY-300 and up to 99,200 B.t.u.h. for CBY-500. *Filter supplied with optional plenum only.																																
Genatron—General Air Conditioning Corp., 4542 E. Dunham St., Los Angeles 23, Calif.																																
LD20	23½	30¼	46¼	24,000*	...	40,260*	Air	Electric	1	Tecumseh	2	JB300	1	230	R-22	4¾	Yes	2.62	4	1500	⅛	1.9	4	1000	¼	Yes	Yes	1	Permanent	16x20	...	...	310
LD30	23½	30¼	46¼	30,500*	...	63,900*	Air	Electric	1	Tecumseh	3	JB300	1	230	R-22	6	Yes	2.62	6	3000	⅛	2.53	4	1200	⅛	Yes	Yes	1	Permanent	16x20	...	...	365
LD40	23½	30¼	46¼	42,000*	...	71,600*	Air	Electric	1	Tecumseh	4	PJE300	1	230	R-22	6	Yes	2.62	6	3800	⅛	2.53	4	1500	⅛	Yes	Yes	1	Permanent	16x20	...	...	420
RCU/RBS37	25/16	30	26/25	24,000*	...	40,250*	Air	Electric	1	Tecumseh	2.5	JB300	1	230	R-22	6	Yes	3.8	6	1500	¼	1.9	4	1000	¼	Yes	Yes	1	Permanent	9x30	...	...	470
RCU/RBS87	25/17¼	30	26/25	37,700*	...	68,500*	Air	Electric	1	Tecumseh	4	PJE300	1—3	208/220	R-22	6.2	Yes	3.8	6	2400	⅛	2.125	4	1400	⅛	Yes	Yes	1	Permanent	16x30	...	...	491
RCU/RBS87	30/20¾	40	26	48,000*	...	86,300*	Air	Electric	1	Tecumseh	5	PFB500	1—3	208/220	R-22	12.5	Yes	6.49	4	4200	¾	4.44	4	2400	¾	Yes	Yes	2	Permanent	20x30	...	...	750
RCU/RBS787	50/36	48	30	98,300*	...	147,000*	Air	Electric	1	York	8.3	TA482	3	208/220	R-22	18	Yes	8.33	6	5600	1	5.0	4	3500	1	Yes	Yes	3	Permanent	20x30	...	...	1325
RCU/RBS107	50/36	66	30	131,000*	...	196,608*	Air	Electric	2	Tecumseh	...	PFB500	3	208/220	R-22	28	Yes	12.1	6	8400	1½	7.0	4	4800	1½	Yes	Yes	3	Permanent	20x30	...	...	1700
RCU/RBS157	50/36	76	30	196,000*	...	294,700*	Air	Electric	2	York	...	TA482	3	208/220	R-22	36	Yes	14.2	6	12000	5	11.8	4	7200	3	Yes	Yes	3	Permanent	25x24	...	...	2280
RO3HP	39½	30	25	37,700*	...	68,500*	Air	Electric	1	Tecumseh	4	PJE300	1—3	208/220	R-22	6.2	Yes	3.04	4	2400	⅛	2.53	4	1400	⅛	Yes	Yes	1	Permanent	16x30	...	...	475
RO5JA	56½	40	26	65,500*	...	98,300*	Air	Electric	1	Tecumseh	5	PFB500	1—3	208/220	R-22	12.5	Yes	6.49	4	4200	¾	4.44	4	2400	¾	Yes	Yes	2	Permanent	20x30	...	...	900
VAG3001	28⅛	30	22	39,000*	...	71,600*	Air	Electric	1	Tecumseh	4	PJE300	1—3	208/220	R-22	5.0	No	7.4	3	2800	⅛	2.6	4	1400	⅛	Yes	Yes	...	...	...	...	...	227
*ASRE ratings.																																
General Electric—General Electric Co., Troup Hwy., Tyler, Texas																																
21WTC30B	31½	31⅝	44	28,000‡	7.0	28,000†	Air	Electric	1	G-E	3	...	1	230	R-22	7	Yes	4.06	3	2000	½	2.63	3	1135	½	Yes	Opt.	...	...	...	...	3.54	450
21WTC36B	31½	31¼	44	34,000‡	8.5	36,000†	Air	Electric	1	G-E	4	...	1—3	230/208/220	R-22	7	Yes	4.78	3	2400	½	2.63	3	1350	½	Yes	Opt.	...	...	...	...	4.54	470
21WTA30B	28¼	31⅝	29	28,000‡	...	29,000†	Air	Electric	1	G-E	3	...	1	230	R-22	11	Yes	4.06	3	2000	½	...	...	...	...	...	...	...	...	...	...	...	297
21WTE30BH	18	28	25¼	28,000‡	7.0	29,000†	Air	Electric	...	...	...	...	1	115 or 230	...	...	...	...	...	...	...	2.50	4	1125	½	Yes	Opt.	...	Disposable	16x25	...	3.54	117
21WTA36B	25¼	31½	29	34,000‡	...	36,000†	Air	Electric	1	G-E	4	...	1—3	230/208/220	R-22	12	Yes	4.78	3	2400	½	...	...	...	...	...	...	...	...	...	...	...	316
21WTE36BH	18	28	25¼	34,000‡	8.5	36,000†	Air	Electric	...	...	...	...	1	115 or 230	...	...	...	...	...	...	...	3.0	4	1350	½	Yes	Opt.	...	Disposable	16x25	...	4.78	133
21WTC48E	27¼	70¾	27¼	48,000‡	...	52,000†	Air	Electric	1	G-E	5	...	1—3	230/208/220	R-22	18	Yes	6.7	5	2880	½	...	...	...	...	...	...	...	...	...	...	5.75‡	585
21WTB48E	18	45	25½	48,000‡	10.6	52,000†	Air	Electric	...	...	...	...	1	230	R-22	1	Yes	...	...	...	...	3.65	4	1600	½	Yes	Opt.	...	Disposable	16x20, 16x25	...	...	140
‡Cooling rating conditions: 80° F.-67° F. I.D.—95° F. O.D. †Heating rating conditions: 45° F. O.D. §Rated cooling point.																																
Laurel—Laurel Products, Inc., P. O. Box 946, Laurel, Miss.																																
LCU 2H	35	30	45½	24,000‡	...	24,400†	Air	Electric	1	B-W or Tec.	2	...	1	230	R-22	8±	No	4.06	3	...	¼	2.12	3	800	¼	...	...	1	Disposable	20x25	...	...	...
LCU 3H	34	30	53½	36,000‡	...	36,600†	Air	Electric	1	Tecumseh	3	...	1—3	230	R-22	10±	No	6.25	3	...	¼	3.12	3	1200	¼	...	...	1	Disposable	20x25	...	...	...
LCU 4H	34	30	53½	48,000‡	...	48,800†	Air	Electric	1	Tecumseh	4	...	1—3	230	R-22	12±	No	10.0	3	...	½	3.65	4	1600	½	...	...	2	Disposable	16x25, 20x25	...	...	...
LCU 5H	34	30	53½	60,000‡	...	62,100†	Air	Electric	1	Tecumseh	5	...	1—3	230	R-22	15±	No	10.0	4	...	½	5.06	3	2000	½	...	...	2	Disposable	16x25, 20x25	...	...	...
HPAC 2H	35	30	45½	24,000‡	...	24,400†	Air	Electric	1	B-W or Tec.	2	...	1	230	R-22	3± 3	Yes	4.06	3	...	¼	2.5	2	800	¼	...	...	...	...	...	...	...	...
HPAC 3H	35	30	45½	36,000‡	...	36,600†	Air	Electric	1	Tecumseh	3	...	1—3	230	R-22	4± 5	Yes	4.06	4	...	¼	2.5	3	1200	¼	...	...	...	...	...	...	...	...
HPAC 4H	35	30	45½	48,000‡	...	47,800†	Air	Electric	2	B-W	4	...	1—3	230	R-22	7± 10	Yes	4.06	4	...	¼	2.5	4	1600	¼	...	...	...	...	...	...	...	...
‡Cooling rating conditions: At 95° F. Ambient. †Heating rating conditions: At 50° F. Ambient.																																
Lennox—Lennox Industries, Inc., 200 South 12th Ave., Marshalltown, Iowa																																
HP3-301	24¼	48¼	33½	37,000	...	122,000	Air	Electric	1	...	3	...	1—3	208/220/230	R-22	...	Yes	6.72	3	2830	½	1.87	3	1200	½	Yes	Yes	...	Optional	...	...	3.9	...
HP3-501	26	58¼	37½	59,000	...	122,000	Air	Electric	1	...	5	...	1—3	208/220/230	R-22	...	Yes	9.88	3	3420	¾	2.69	4	2000	½	Yes	Yes	...	Optional	...	...	7.2	...
Marvair—Muncie Gear Works, P. O. Box 433, Cordele, Ga.																																
300HP	26	42	47	37,400	30½	25,600*	Air	Electric	1	Tecumseh	3	PJE300	1—3	230/208	R-22	6	No	7.5	3	2800	¼	2.86	4	1200	¼	Yes	Yes	1	Disposable	20x25	...	2.75	788
500HP	26	42	47	60,800	30½	42,000*	Air	Electric	1	Tecumseh	5	PFB500	1—3	230/208	R-22	8	No	8.66	4	4400	¼	4.43	4	2000	½	Yes	Yes	2	Disposable	16x20, 20x20	...	6.50	1017
*At 30° F.																																
Mathes—The Mathes Co., Div. Glen Alden Corp., 1501 East Broadway, Fort Worth 5, Texas																																
20 HAR-1P-HP	23	34	24	20,800	...	20,600	Air	Electric	1	B-W	2	H490TA	1	230	R-22	...	No	3.9	2	2200	¼	2.9	2	780	¼	Yes	Yes	1	Disposable	20x20	...	2.24	269
26 HAR-1P-HP	23	47	24	24,700	...	24,700	Air	Electric	1	Tecumseh	2.6	PJG300	1	230	R-22	...	No	5.4	2	2200	¼	2.9	3	925	¼	Yes	Yes	1	Disposable	20x25	...	2.84	325
32 HAR-1P-HP	23	47	24	30,500	...	30,500	Air	Electric	1	Tecumseh	3.2	PJG300	1	230	R-22	...	No	5.4	3	2200	¼	2.9	4	1140	¼	Yes	Yes	1	Disposable	20x25	...	2.54	330
36 HAR-1-3P-HP	23	47	24	34,300	...	34,300	Air	Electric	1	Tecumseh	3.6	PJE300	1—3	230/208/220	R-22	...	No	5.4	4	2200	¼	2.9	3	1280	¼	Yes	Yes	1	Disposable	20x25	...	4.31	335
48 HAR-1-3P-HP	32	41	27	45,600	...	45,600	Air	Electric	2	B-W	2.5	H490TA	1—3	230/208/220	R-22	...	No	10.9	3	3200	½	5.5	3	1710	½	Yes	Yes	2	Disposable	16x25	...	5.38	480
62 HAR-1-3P-HP	32	41	27	59,000	...	59,000	Air	Electric	1	Tecumseh	6.2	PFB500	1—3	230/208/220	R-22	...	No	10.9	3	3500	½	5.5	3	2200	½	Yes	Yes	2	Disposable	16x25	...	6.85	525
90 HAR-3-4P-HP	45	75	27	86,500	...	86,500	Air	Electric	1	Copeland	9	MRG750	3	208/220/440	R-22	...	No	19.6	3	7650	¾	8.2	3	3240	1	Yes	Yes	3	Disposable	16x25	...	9.89	840
120 HAR-3-4P-HP	45	75	27	116,000	...	116,000	Air	Electric	1	Copeland	12	9R8-1000	3	208/220/440	R-22	...	No	19.6	3	7650	¾	10.9	3	4250	1½	Yes	Yes	3	Disposable	20x25	...	11.1	895
24 HAH-1E-HP	23½	52¾	27	24,000	...	24,000	Air	Electric	1	B-W	2.2	H490TA	1	230	R-22	...	Yes	3.9	3	1500	¼	2.9	4	880	¼	Yes	Yes	1	Disposable	18½x22	...	3.2	271
36 HAH-1-3E-HP	25⅝	49¼	40¼	34,000	...	34,000	Air	Electric	1	Tecumseh	3.6	PJE300	1—3	230/208/220	R-22	...	Yes	4.7	4	2000	¼	2.5	4	1275	¼	Yes	Yes	1	Disposable	20x20	...	4.6	474
63 HAH-1-3E-HP	31⅛	54¼	50¼	58,000	...	58,000	Air	Electric	1	Tecumseh	6.2	PFB300	1—3	230/208/220	R-22	...	Yes	9.3	3	2300	⅛	4.7	4	2180	½	Yes	Yes	2	Disposable	16x25	...	7.5	667
Note: "HAR" models are split system heat pumps. "HAH" models are self-contained heat pumps.																																
McMillan Heat Pumps—Heating—Cooling from The Earth—McMillan Heat Pumps, Inc., 1501 Miami Rd., P. O. Box 5897, Jacksonville 7, Fla.																																
30-1A	67	36	23	37,300‡	...	47,600†	Water	...	1	Copeland	3	4RC-300	1	230	R-22	19	Yes	...	...	...	...	5.2	4	1200	⅛	...	Yes	2	Disposable	16x25	3—3	3.9	950
40-1A	67	40	23	48,000‡	...	62,000†	Water	...	1	Copeland	4	LRH-400	1—3	230	R-22	14	Yes	...	...	...	...	6.0	4	1600	⅛	...	Yes	2	Disposable	20x35	3—3	4.0	1160
50-1A	67	43	23	60,800‡	...	78,700†	Water	...	1	Copeland	5	LRC-500	3	230	R-22	16	Yes	...	...	...	...	6.9	4	3000	½	...	Yes	4	Disposable	(2) 15x20, (3) 20x20	3—3	4.8	1230
75-1A	67	55	23	94,700‡	...	117,300†	Water	...	1	Copeland	7½	MRG-750	3	230	R-22	22	Yes	...	...	...	...	8.1	4	3000	¾	...	Yes	4	Disposable	(2) 20x25, (2) 16x25	3—3	7.4	1900
100-1A (single)	88	67½	29½	121,600‡	...	158,100†	Water	...	1	Copeland	10	9R8-1000	3	230	R-22	32	Yes	...	...	...	...	13.8	4	4000	1	...	Yes	6	Disposable	(2) 20x16, (2) 25x16	3—3	9.6	2040
100-1A (dual)	88	67¾	29½	121,600‡	...	158,100†	Water	...	2	Copeland	5	LRC-500	3	230	R-22	36	Yes	...	...	...	...	13.8	4	4000	2	...	Yes	6	Disposable	(2) 25x16, (2) 30x16	3—3	9.6	2040
150-1A	84	70	34	189,400‡	...	231,000†	Water	...	2	Copeland	7½	MRG-750	3	230	R-22	44	Yes	...	...	...	...	16.2	4	6000	1½	...	Yes	6	Disposable	(4) 25x16, (2) 25x20	3

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (B.t.u.h.)	Dehum. (Pts./Hr.)	Heating (B.t.u.h.)	Heat Source	Supplementary	Compressor No.	Make	Hp.	Mfrs. No.	Motor Phase	Volts	Refrigerant No. (12, 22)	Charge (Lbs.)	Factory Charged?
Mobilaire—Westinghouse Electric Corp., 625 Page Blvd., Springfield 2, Mass.																	
MDR-122	14	24	15	9,600	2.7	9,400	...	...	1	Tecumseh	1	AU1F12	1	230	R-22	1.1	Yes
MDR-172	14	24	18	11,800	4.5	11,400	...	...	1	West.	1½	C-152	1	230	R-22	1.8	Yes
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.																	
MQR200	16½	26½	31½	18,500	...	13,500	Air	...	1	Tecumseh	1¾	...	1	230	R-22	...	Yes
MPAC2	26	32	44	21,900	...	22,400	Air	...	1	Tecumseh	3	...	1	230	R-22	...	Yes
MPAC3	26	32	44	33,000	...	36,200	Air	...	1	Tecumseh	3	...	1—3	230	R-22	...	Yes
MPAC4	26	32	44	43,200	...	47,400	Air	...	2	Tecumseh	3	...	1	230	R-22	...	Yes
MPAC5	30	44	66	58,000	...	62,300	Air	...	1	Tecumseh	5	...	1—3	230	R-22	...	Yes
MPAC6	30	44	66	64,000	...	70,000	Air	...	2	Tecumseh	2	...	1	230	R-22	...	Yes
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.																	
315-31	28	34⅛	39½	32,000‡	8.7	30,000‡	Air	...	1	Tecumseh	3	PJG300	1	230	R-22	6.42	Yes
315-1-41	25¼	37½	42¾	42,000‡	11.5	36,000‡	Air	...	2	Tecumseh	2	B21U18	1	230	R-22	*	Yes
Prop-R-Temp—Typhoon Heat Pump Co., 2001 Garcia Ave., P. O. Box 1153, Tampa, Fla.																	
25H	66	24	26	21,000*	...	26,700**	Water	...	1	Tecumseh	2	JE230	1—3	208/230/230	R-22	5.5	Yes
55HU	66	24	26	45,300*	...	57,700**	Water	...	1	Tecumseh	3	JE300	1—3	208/220/230	R-22	7.5	Yes
70H	66	66	26	62,000*	...	77,400**	Water	...	2	Tecumseh	3	JE300	1—3	208/220/230	R-22	11	Yes
80HU	70	28	30	72,300*	...	88,400**	Water	...	1	Tecumseh	5	FB500	1—3	208/220/230	R-22	12	Yes
110H	66	46	26	90,400*	...	115,400**	Water	...	2	Tecumseh	3	JE300	1—3	208/220/230	R-22	15	Yes
150H	76	55	30	125,000*	...	156,000**	Water	...	1	Copeland	10	9R8-1000	3	208/220/440	R-22	12.5	Yes
160H	76	55	30	144,400*	...	177,200**	Water	...	3	Tecumseh	5	FB500	1—3	208/220/230	R-22	24	Yes
225H	76	55	30	180,000*	...	227,000**	Water	...	1	Brunner	15	150HP	3	208/220/440	R-22	19.5	Yes
300-3H	76	55	30	240,000*	...	310,000**	Water	...	2	Copeland	10	9R8-1000	3	208/220/440	R-22	25	Yes
375-3H	84	62	35	311,000*	...	378,000**	Water	...	3	Brunner	10-15	100HP/150HP	3	208/220/440	R-22	30	Yes
450-3H	84	62	35	370,000*	...	450,000**	Water	...	3	Brunner	15	150HP	3	208/220/440	R-22	33	Yes
600-3H	98	62	46	492,000*	...	606,000**	Water	...	3	Brunner	10-15-15	100HP/150HP	3	208/220/440	R-22	50	Yes
675-3H	98	62	46	554,000*	...	680,000**	Water	...	3	Brunner	15	150HP	3	208/220/440	R-22	58	Yes
33AH	63	21	22	29,000*	...	36,000**	Water	...	1	Tecumseh	2	JB300	1—3	208/220/230	R-22	3.25	Yes
52AH	63	21	22	44,400*	...	56,000**	Water	...	1	Tecumseh	3	JE300	1—3	208/220/230	R-22	3.5	Yes
77AH	75	25	26	70,000*	...	86,000**	Water	...	1	Tecumseh	5	FB500	1—3	208/220/230	R-22	5.5	Yes
97AH	66	46	26	89,600*	...	114,000**	Water	...	1	Copeland	7½	MRG-750	3	208/220/440	R-22	8	Yes
WW35H	28	24	24	29,800*	...	37,300††	Water	...	1	Tecumseh	3	JE200	1—3	208/220/230	R-22	3.2	Yes
WW55H	33	24	24	43,400*	...	54,250††	Water	...	1	Tecumseh	3	JE200	1—3	208/220/230	R-22	3.5	Yes
WW80H	43	28	28	68,300*	...	86,600††	Water	...	1	Tecumseh	5	FB500	1—3	208/220/230	R-22	5.5	Yes
WW120H	42	28	28	92,300*	...	115,500††	Water	...	1	Copeland	7½	MRG-750	3	208/230/440	R-22	9.5	Yes
WW150H	43	28	28	120,000*	...	150,000††	Water	...	1	Copeland	10	9R8-1000	3	208/220/440	R-22	12.5	Yes
WW225H	39	28	28	186,000*	...	232,500††	Water	...	1	Brunner	15	150HP	3	208/220/440	R-22	18.5	Yes
WW300-2H	60	42	34	235,000*	...	294,000††	Water	...	2	Copeland	10	9R8-1000	3	208/220/440	R-22	24	Yes
WW375-2H	60	42	34	305,000*	...	371,800††	Water	...	2	Brunner	10-15	100HP/150HP	3	208/220/440	R-22	30	Yes
WW450-2H	60	42	34	252,000*	...	445,000††	Water	...	2	Brunner	15	150HP	3	208/220/440	R-22	47.5	Yes
WW600-3H	70	42	34	479,000*	...	602,000††	Water	...	3	Brunner	10-15-15	100HP/150HP	3	208/220/440	R-22	67.5	Yes
WW675-3H	70	42	34	526,000*	...	667,000††	Water	...	3	Brunner	15	150HP	3	208/220/440	R-22	75	Yes
WW750-4H	86	84	45	596,000*	...	731,000††	Water	...	4	Brunner	10-10-15-15	100HP/150HP	3	208/220/440	R-22	82.5	Yes
WW900-4H	86	84	45	715,000*	...	880,000††	Water	...	4	Brunner	15	150HP	3	208/220/440	R-22	97.5	Yes
WW1125-5H	98	84	45	862,000†	...	1,100,000††	Water	...	5	Brunner	15	150HP	3	208/220/440	R-22	120	Yes
A3	21	21	42	26,150‡	...	31,000‡‡	Air	...	1	Tecumseh	3	JE300	1—3	208/220/230	R-22	7.5	Yes
A5	25	25	30	40,800‡	...	49,300‡‡	Air	...	1	Tecumseh	5	FB500	1—3	208/220/230	R-22	14	Yes
A7	25	49	30	56,100‡	...	73,200‡‡	Air	...	1	Copeland	7½	MRG-750	3	208/220/440	R-22	19	Yes
A10	25	58	30	130,400‡	...	95,300‡‡	Air	...	1	Copeland	10	9R8-1000	3	208/220/440	R-22	26	Yes
A15	30	58	30	180,000‡	...	146,000‡‡	Air	...	1	Brunner	15	150HP	3	208/220/440	R-22	42	No
A20	30	76	70	234,000‡	...	185,000‡‡	Air	...	2	Copeland	10	9R8-1000	3	208/220/440	R-22	56	No
A25	34	75	70	282,900‡	...	231,000‡‡	Air	...	3	Brunner	10-15	100HP/150HP	3	208/220/440	R-22	66	No
A30	34	75	70	377,000‡	...	351,000‡‡	Air	...	3	Brunner	15	150HP	3	208/220/440	R-22	72	No

Cooling rating conditions: *80° d.b., 67° w.b.-return air. †50° F. leaving water, 8° t.d. condenser water 75° F. ‡95° F. outdoor air, 80° d.b., 67° w.b.-return air. Heating rating conditions: **70° d.b. return air, 75° water. ††120° leaving water, 10° t.d., condenser water 75° F. ‡‡30° F. outdoor air, 70° d.b. return air. Weights are shipping weight.

Model No.	Outside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Inside Coil Face Area (Sq. Ft.)	Rows Deep	C.f.m.	Blower Hp.	Control Automatic Change Over?	Air Filters No.	Type	Dimensions (In.)	Water Usage (G.p.m./Ton)	Kw. Input Total	Net Weight
Mobilaire—Westinghouse Electric Corp., 625 Page Blvd., Springfield 2, Mass.															
MDR-122	.98	3	330	.170	1.27	2	225	.170	No	1	Permanent	6¼x23¾	...	1600	100
MDR-172	.98	4	440	.3	1.27	3	300	.3	No	1	Permanent	6¼x23¾	...	2000	137½
Mor-Sun—Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.															
MQR200	...	...	...	...	2.14	2	450	...	Yes	...	Optional	...	...	...	315
MPAC2	...	...	...	...	2.14	3	600	...	Yes	...	Optional	...	...	...	395
MPAC3	...	...	...	...	2.53	4	1300	...	Yes	...	Optional	...	...	...	465
MPAC4	...	...	...	...	3.08	4	1400	...	Yes	...	Optional	...	...	...	475
MPAC5	...	...	...	...	4.67	3	2000	...	Yes	...	Optional	...	...	...	700
MPAC6	...	...	...	...	4.67	4	2300	...	Yes	...	Optional	...	...	...	700
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.															
315-31	4.38	3	2500	¾	2.19	4	1185	¾	Yes	1	Permanent	14x30	...	3.05	480
315-1-41	5.38	4	2765	¾	4.08	4	1515	¾	Yes	1	Permanent	14x30	...	3.58	580
Prop-R-Temp—Typhoon Heat Pump Co., 2001 Garcia Ave., P. O. Box 1153, Tampa, Fla.															
25H	...	...	...	...	2.75	4	1000	½	Yes	1	Disposable	20x20	2	2.85	575
55HU	...	...	...	...	3.65	4	1400	½	Yes	1	Disposable	20x20	2	3.95	580
70H	...	...	...	...	5.5	4	2000	¾	Yes	2	Disposable	20x20	2	5.7	1105
80HU	...	...	...	...	5.75	4	2400	¾	Yes	1	Disposable	30x25	2	6.6	650
110H	...	...	...	...	7.3	4	2800	¾	Yes	2	Disposable	20x20	2	7.9	1100
150H	...	...	...	...	8.1	4	4000	¾	Yes	2	Permanent	22x22	2	10.8	1400
160H	...	...	...	...	11.5	4	4800	1	Yes	2	Disposable	30x25	2	13.2	1700
225H	...	...	...	...	11.0	4	6000	1½	Yes	4	Permanent	22x22	2	14.8	1850
300-3H	...	...	...	...	16.3	4	8000	2	Yes	4	Permanent	22x22	2	19.7	2000
375-3H	...	...	...	...	19.1	4	10000	3	Yes	4	Permanent	25x30	2	25.1	2650
450-3H	...	...	...	...	22.0	4	12000	5	Yes	4	Permanent	25x30	2	30.8	2750
600-3H	...	...	...	...	30.1	4	16000	7½	Yes	6	Permanent	30x30	2	41.4	3350
675-3H	...	...	...	...	33.0	4	18000	7½	Yes	6	Permanent	30x30	2	46.2	3550
33AH	...	...	...	...	2.6	3	900	½	Yes	1	Permanent	18x18	2	2.8	490
52AH	...	...	...	...	2.6	5	1400	½	Yes	1	Permanent	18x18	2	2.8	540
77AH	...	...	...	...	3.9	5	2300	¾	Yes	1	Permanent	22x22	2	6.7	790
97AH	...	...	...	...	6.1	3	3000	¾	Yes	1	Permanent	22x36	2	7.6	980
WW35H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	2.55	410
WW55H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	3.35	440
WW80H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	5.70	720
WW120H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	7.00	1130
WW150H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	9.90	1330
WW225H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	13.15	1450
WW300-2H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	17.40	2380
WW375-2H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	22.1	2475
WW450-2H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	25.1	2900
WW600-3H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	34.0	3650
WW675-3H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	38.5	3750
WW750-4H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	42.9	4300
WW900-4H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	52.0	4550
WW1125-5H	...	...	...	...	...	...	...	...	Yes	...	...	...	2	66.0	4900
A3	2.6	5	1300	⅙	2.6	5	1300	⅙	Yes	1	Permanent	18x18	...	4.6	770
A5	3.9	5	2000	⅓	3.9	5	2000	⅓	Yes	1	Permanent	22x22	...	6.8	1190
A7	12.2	3	5600 (2)	⅓	6.1	3	2800	¾	Yes	2	Permanent	22x36	...	9.6	1360
A10	16.2	4	7600 (2)	¾	8.1	4	4000	¾	Yes	2	Permanent	22x22	...	12.9	2020
A15	22.0	4	14000	3	11.0	4	6000	1½	Yes	2	Permanent	25x30	...	19.4	2800
A20	32.4	4	18000	5	16.2	4	8000	3	Yes	2	Permanent	25x30	...	28.0	3300
A25	40.5	4	22500	7½	19.1	4	10000	5	Yes	4	Permanent	25x30	...	35.6	3600
A30	48.6	4	27000	10	22.0	4	12000	5	Yes	4	Permanent	25x30	...	46.0	3930
Revco Reversamatic—Revco, Inc., Deerfield, Mich.															
*HPC-36C	5.5	3	2700	½	...	...	...	...	Yes	1	Disposable	20x25	...	...	600
†HPE-36	...	...	...	...	2.7	4	1300	¼	Yes	1	Disposable	20x25	...	...	590
*HPC-42C	5.5	3	2700	½	...	...	...	...	...	...	...	...	...	...	...
†HPE-42	...	...	...	...	2.7	4	1600	¼	...	...	...	...	...	...	...
Royal & Chattanooga—Chattanooga Royal Co., First & Delmar Sts., Chattanooga, Tenn.															
RP36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
P24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
P36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
P40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PHEB36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thomas A. Edison—McGraw-Edison Co., 704 North Clark St., Albion, Mich.															
TR3RA-21	4.0	4	2000	⅛	...	...	...	...	Yes	...	...	...	...	2.97	340
TBER3A	...	...	...	...	3.4	4	1250	⅛	...	1	Disposable	16x20	...	...	112
Tuckaway—Perfection Industries, 1135 Ivanhoe Rd., Cleveland 10, Ohio															
PAS21AH	3.36	3	2000	⅓	1.75	4	800	⅓	Yes	...	...	...	...	2.9	410
PAS30H	3.8	4	2700	¼	2.33	5	1100	⅓	Yes	...	...	...	...	4.8	464
PAS31AH	3.8	4	2700	¼	2.33	5	1100	⅓	Yes	...	...	...	...	4.7	544
PAS60AH	6.22	4	3700	⅜	3.61	5	1700	¾	Yes	...	...	...	...	7.2	850
Vikimatic—Viking Mfg. Corp., 1747 Chester Ave., Cleveland 14, Ohio															
PA30H	3.3	3	1850	⅓	1.9	3	720	⅓	Yes	...	...	...	...	2.1	365
PA32H	4.9	4	2350	⅓	2.8	3	1180	⅓	Yes	...	...	...	...	4.65	416
PA40H	4.9	4	2350	¼	2.8	4	1380	⅓	Yes	...	...	...	...	5.9	490
Weatherking—Weatherking of Florida, 2310 Coolidge Ave., Orlando, Fla.															
WKA30	5.4	4	2300	⅓	3.0	5	1400	⅓	Yes	1	Disposable	20x25	...	4.8	650
WKA40	7.1	4	4200	¾	4.0	5	1750	½	Yes	2	Disposable	14x25	...	6.5	800
WKA50	9.0	4	5400 (2)	½	4.75	5	2400	½	Yes	3	Disposable	16x25	...	7.1	1060
WKA75	14.2	4	7800 (2)	½	7.0	5	3500	¾	Yes	3	Disposable	16x25	...	10.8	1250
WKA100	18.0	4	9800 (2)	¾	9.5	5	4800	1	Yes	3	Disposable	20x25	...	13.4	1400
WKA150	27.0	4	12600 (3)	¾	14.0	5	7000	1½	Yes	6	Disposable	16x25	...	19.7	2050
WK300	...	...	...	...	3.0	5	1400	½	Yes	1	Disposable	20x25	1.5	4.1	800
WK500	...	...	...	...	4.75	5	2400	½	Yes	3	Disposable	16x25	1.5	6.7	1000
WK750	...	...	...	...	7.0	5	3500	¾	Yes	3	Disposable	16x25	1.5	9.7	1350
WK1000	...	...	...	...	9.5	5	4800	1	Yes	3	Disposable	20x25	1.5	13.4	1500
Welbilt—Welbilt Corp., Maspeth 78, L. I., N. Y.															
9WP2RA	2.9	1	600	⅛	1.1	3	300	⅛	Yes	Semi.	1	Permanent	8¼x19¾	1.35	130
9WS2RA	2.9	1	600	⅛	1.1	3	300	⅛	Yes	Semi.	1	Permanent	8¼x19¾	1.5	130
9WW2RA	2.9	2	600	⅛	1.1	3	320	⅛	Yes	Semi.	1	Permanent	8¼x19¾	2.1	190
9WX2RA	2.9	3	600	¼	1.1	4	350	⅛	Yes	Semi.	1	Permanent	8¼x19¾	2.4	190
9WY2RA	2.9	3	600	⅛	1.1	4	350	⅛	Yes	Semi.	1	Permanent	8¼x19¾	2.4	190
Westinghouse—Westinghouse Electric Corp., P. O. Box 510, Staunton, Va.															
RHP-33	6.6	3	...	½	2.6	4	1200	½	...	Yes	2	Disposable	20x16	...	...	875
RHP-73	13.4	3	...	1	5.6	4	2400	¾	...	Yes	2	Disposable	25x20	...	...	1320
Wright-Temp—Wright-Temp Mfg. Co., Inc., 2902 W. Thomas Rd., P. O. Box 11247, Phoenix, Ariz.															
HP2-1	3.5	3	1800	⅛	1.75	4	800†	⅛	Yes	Opt.	...	...	...	...	...	265
HP3-1-3	4.33	4	2800	⅛	2.92	5	1200†	⅛	Yes	Opt.	...	...	...	...	...	420
HP5-1-3	7.45	4	4500	¼	4.55	5	2000†	⅛	Yes	Opt.	...	...	...	...	...	760
York Heat Pump—York Corp., Subsidiary of Borg-Warner Corp., Grantley Rd., York, Pa.															
HP36	4.91	4	2700	⅓	3.79	3	1200	¼	Yes	Yes	...	...	...	...	...	565

Cooling rating conditions: *80° d.b., 67° w.b.-return air. †50° F. leaving water, 8° t.d. condenser water 75° F. ‡95° F. outdoor air, 80° d.b., 67° w.b.-return air. Heating rating conditions: **70° d.b. return air, 75° water. ††120° leaving water, 10° t.d., condenser water 75° F. ‡‡30° F. outdoor air, 70° d.b. return air. Weights are shipping weight.

Cooling rating conditions: ‡80°-50% r.h. indoor, 95° F. outdoor. †Heating rating conditions: 45° outdoor. * 62.5 cu. in upper system, 57.5 cu. in lower system. †At .2 E.S.P. dry coil.

Cooling rating conditions: ‡95° ambient, 80°-67° entering air. †Heating rating conditions: 30° ambient, 72° entering air; no supplementary heat on water units. 75° water.

Cooling rating conditions: ‡95°/70° & 80°/67°. †Heating rating conditions: 45° outdoor—70° indoor.

*Outdoor section. †Indoor section. ‡Heating rating conditions: 25° F. outdoor, 70° F. indoor. 14-8-12-16 KW as demand requires.

Cooling rating conditions: ARI Standard. †Heating rating conditions: At 45° F.